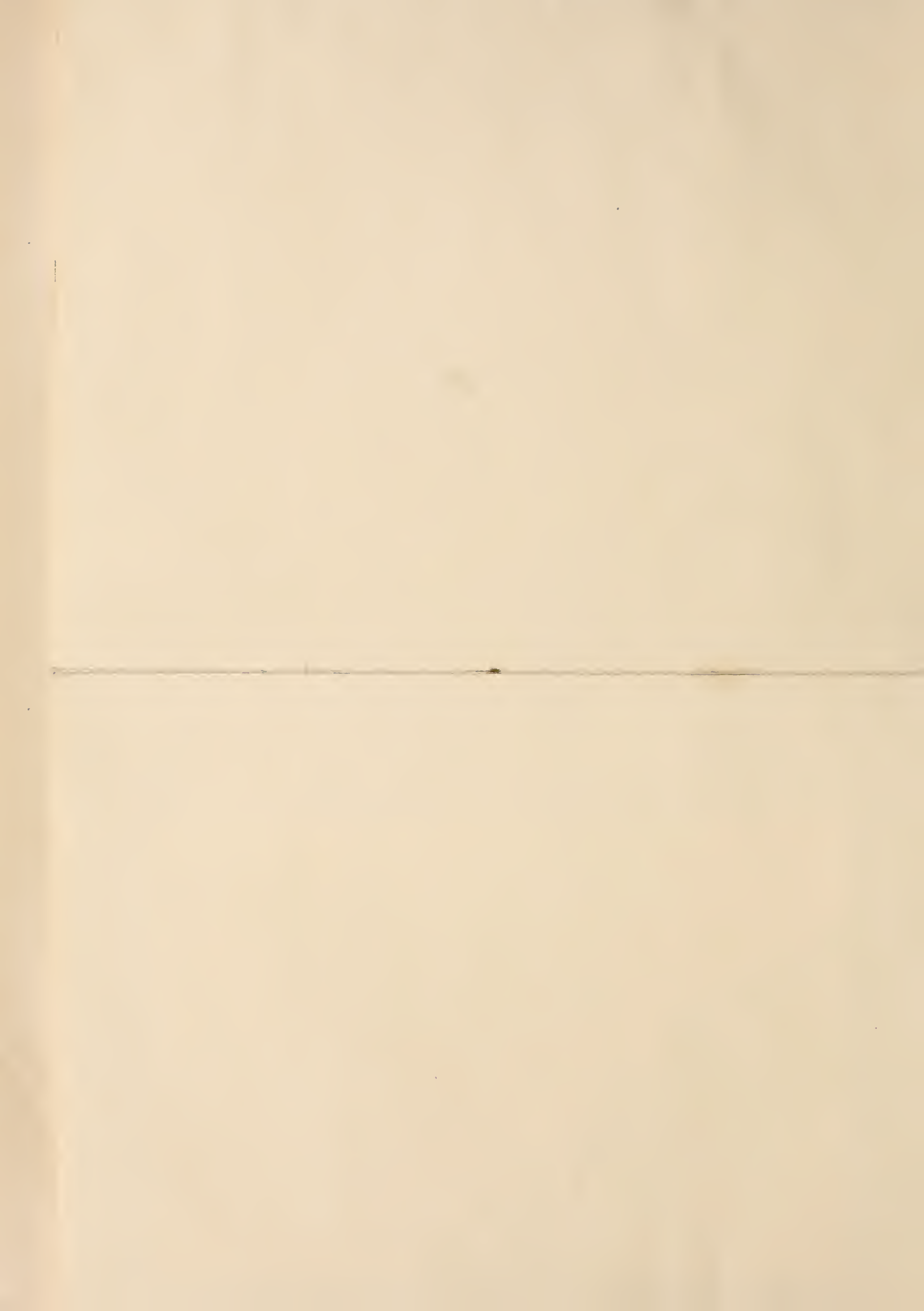


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DUSTON ON ADVERTISING.

The Papers That Bring the Inquiries are Those Through Which Sales are Made.



SEVERAL months ago, in a letter relating to his own advertising, Mr. Arthur G. Duston, Marlboro, Mass., referred to a matter of interest to

advertisers, which he and the writer had discussed on a previous occasion. In this letter he said: "I have tested the matter this season, and find that you can hank pretty well on the papers that are given credit for calls as the ones that do the business, and the others are so much dead wood that a man is carrying. I think some time I will write an article on this. Perhaps F.-P. would like it."

Mr. Duston's letter went to the pigeon hole where letters containing suggestions for articles go. A few days ago we took it out, and on the basis of that offer drew on him for the article — making it a "sight draft," because from past experience we knew better than to name some indefinite future time. Last year he was to write an article for F.-P. at his convenience. We have not seen it yet.

Mr. Duston honored our draft as follows:—

Friend Robinson:— I see that one must be very careful what they promise or even suggest to a poultry editor they might be willing to do; but agreeable to the note I wrote you in March, regarding advertising, will give you just a few bits of my experience, which, if you think would interest the readers of FARM-POULTRY, you are at liberty to use.

I have been before the public as an advertiser for a good many years, and of course as one comes into these different papers he always wonders if he is getting full value for his money. I have gone to the expense of a full card system, using the improved Shaw-Walker. I have carefully keyed my ads., and every letter that comes, a record is kept of the source of inquiry. In answering my correspondence I always put in a return envelope with the key number stamped on.

Of course in many cases the correspondent fails to give any clue of the paper which brought the query. In such cases, on the inside lap of the return envelope is stamped, "In ordering, please state where you saw my ad." This does not always give the desired result, for quite often it will happen in the haste of putting the letter into the envelope that this will be overlooked.

I have never been able to determine a just and equitable way to distribute these calls or orders marked "unknown," and had wondered if it was fair, as many have done, to proportion these orders to the paper or papers in proportion as the calls come. It did not seem to me that it was; as, for instance, some certain paper gives apparently few inquiries and

some few orders, while in other cases the paper gives a prolific number of inquiries with hardly an order traceable to them. Another paper will give a large number of inquiries and orders in proportion, while another gives neither inquiries or orders.

It seemed to me to proportion these among these papers that furnished inquiries was hardly fair, but how to do better I did not

know. This was a subject of considerable anxiety to me,— not but what I was getting a good return for my money as a total, but as to whether a more judicious outlay could not be made. I felt if I cut off an ad. I always feared that this same paper was doing more than it appeared to, for the reason that it might not be the ads. of the paper which got the credit for inquiry, but it might be a culmination of all the advertising that I had done, and the favorite journal got the credit.

I went on this principle for a year or more, when I commenced to drop out those papers that did not give me the service that the outlay warranted, and found that my business was just as good with the loss of one or more papers, so a year ago I made quite a radical move, cutting out five journals.

Now I would not say a word to discredit

season to note the effect of such a vigorous treatment of the subject, and as this season is drawing to a close which shows the result of my judgment in the matter, I will just say for a conclusion that it has surpassed any one of my previous business years with poultry, that I shall have a large gain over last year, and that March, 1902, proved the largest month's business that I have ever done.

Advertising is a subject that certainly interests every poultry fancier that is reading the journals today, as to what papers and how many they shall go into. My advice would be to take one journal if they did not feel warranted to the outlay of considerable money at the start, and to vigorously push the merits of their stock and the winnings through this journal until they get somewhat established in what they might consider a reputation. Then

it is an easy matter to add one paper after another. They must expect at the first outlay not to sell stock enough, with probably some exceptions to this rule, to pay their advertising bill. If they do this they ought to be satisfied.

Doubtless many will consider this as rather a hard statement, but why should they? Ask those manufacturers' salesmen, who start out with a new line of samples in a new territory, what they can expect for their first season's work, and they will tell you frankly if they get enough out of their commissions to pay their expenses, that is all they expect to do. Then why should that party with a few pens of birds expect to make 100 per cent as a salesman his first season?

It is by persistently sticking to advertising that the returns come, and this is the reason why I recommend that only one paper is taken, for the money will go so much further, and the returns are much surer than to dabble a little in so many journals.

Now, friend Robinson, if I have given a thought which will be of help to any poultry breeder, however small, I shall be more than glad. I am not one of those who are jealous of the success of another. I have always gone on the principle that this is an awfully big world, and Duston never can owe it. There is room enough for every one. If the business is done legitimately, some one can make sales with certain parties that I cannot, and the more that are interested, the wider spreads the enthusiasm, the greater the market. I am always delighted to see anyone succeed in any venture they undertake.

If I have written anything that is unfit for publication, I shall expect that you will lop it out, and would not be surprised if you wastebasketed the whole matter.

Wishing you and the paper that received my first ad. so many years ago, and has had its share in my success, may have all the success in the world, I am

Yours very truly,
ARTHUR G. DUSTON.

Advertising.

We may live without poetry, music and art,
We may live without conscience, and live without heart;
We may live without friends and live without faith,
But business today cannot live without ads.
—The Country Merchant



BRED & OWNED BY
ARTHUR G. DUSTON, MARLBORO, MASS.

DUSTON'S WHITE WYANDOTTES.

The male and four of the females exhibited in the display pen at Boston, 1902. Mr. Duston says this is the whitest male he ever saw, and has proved a good breeder, heading one of his best pens this season.

know. Thus, as you sum up the matter at the end of the season, which ends with me in July, you wonder how much of your advertising money has been dead waste, how much you are spending that is giving you no return whatever, or perhaps as far as you can see, just a new dollar for an old one, and the stock has apparently been given away. In other words, all that has been taken in from some given source has been turned over to the paper that furnished the inquiry.

any one of them, for to my absolute knowledge they have paid many of their advertisers splendidly, and do today. Doubtless it is the same with this as with everything else in the world. One man will not succeed in a business, while another does, so one man will not succeed in every journal. It is possible that his style of advertising, or the readers that he reaches are not such as would be interested in the grade of goods that he has to offer, so I have watched very closely during the past

RATIONS AND RESULTS.

Some Comparisons of the "Scientifically" Devised and the Practically Compounded Ration.



EDITOR FARM-POULTRY:—In reading an admirable article in *American Poultry Journal*, entitled, "Science in Practice," by Jas. Shackleton, on balanced rations for fowls, I see he says, "I rarely narrow the ratio for Wyandottes beyond 1 to 4, though in cold weather we often widen it to 1 to 5; but we have not settled definitely on these ratios as necessarily the best for our fowls." He also says, "our standard nutritive ratio is 1 to 4 hitherto, based on contents of nutrients without regard to digestible co-efficients."

My theoretical teachings I got from that excellent book, "Poultry Craft," and FARM-POULTRY, one of the best practicable, combined with soundest judgment, and perfectly unbiased papers ever published in the United States in the interest of poultry. In looking over my report you will see that all of my fowls are standard bred in every sense of the word, and all the pullets in pen 1, with the

Grain fed with this mash in winter has a nutritive ratio of 1:6.5: a potential energy of 96.

All grain was fed in a deep litter of rye straw, six to ten inches deep. Size of pens 1 and 2, 16x24 ft. each. Leghorn pen, 12x24 ft. Grit, shells, charcoal and a dust box in all pens. Warm drinking water when necessary. Size of yards, 50x100.

Out of pen 2 I put in incubator 90 eggs, March 2. 3d test, 15th day, 79 eggs fertile. Hatched 74; raised 69 to two weeks old, and sold them at 20c. each; result, \$13.80.

I hatched out in incubator for a friend of mine 20 chickens out of 30 eggs from his exhibition S. C. Brown Leghorns. I raised 17 for him to 4 weeks old; he gave me 6 chicks for my trouble. A cat got three of them, but the remaining 3 left me luckily turned out to be A1 pullets. Their egg record is a "crack-a-jack" one. I did not dispose of these birds, but placed them in charge of my mother-in-law, who professes and honestly believes they are the three greatest layers in the United

Record of Mr. Lane's Three Pens.

PEN NO. 1.—22 W. WYANDOTTE PULLETS. (Hatched April 10, 1901).

Month.	Hens Laying.	Eggs Rec'd.	Average.	Remarks.	"Cyphers Incubator," Pullets.
Nov. 17, 1901.	12	119	9 11-12	15 days	Average weight 5½ lbs.
Dec.	16	236	14 3-4	31 days	
1902.					Value of eggs sold at door, 123½ doz. @35c. per doz., \$42.94
Jan.	22	349	15 19-22	31 days	
Feb.	22	359	17 15-22	28 days	
March	22	379	17 5-22	31 days	
		1,472		136 days	

PEN NO. 2.—BREEDING PEN.

Four 3 year old hens; three 2 year old hens; two pullets hatched May 15, 1901, began laying Jan. 22, 1902. One cockerel, weight 8½ lbs. Average weight of hens and pullets 6½ lbs.

Month.	Hens Laying.	Eggs Rec'd.	Average.	Remarks.	Pen showed at Chicago show, 1902.
Jan. 18.	7	37	5 2-7	14 days	scoring 94, 94½, 93½, 94; cockerel, 92½.
Feb. 1.	9	126	14	28 days	Egg record of two hens this pen, 182.
March 1.	9	145	16 1-9	31 days	191. Sold 6 sittings (90) eggs for \$13.50.
		308		73 days	Balance of eggs, 128, I used for table. Used in incubator 90 eggs.

THREE S. C. BROWN LEGHORN PULLETS. (Hatched June 18, 1901).

Month.	Hens Laying.	Eggs Rec'd.	Average.	Remarks.	Average weight, 3½ lbs.
Jan. 10.	3	28	9 1-3	22 days	"Prairie State Incubator, Baby 2."
Feb.	3	51	17	28 days	Value of eggs sold, 11 5-12 doz. @35c. = \$4.00
March	3	58	19 1-3	31 days	5 1-6 doz. @30c. = 1.55
April	3	62	20 2-3	30 days	
		199		111 days	\$5.55

exception of 4, were bred from pen 2. The cockerel is a son of one of the two year old hens.

I sold all of my stock, with the exception of three Leghorn pullets, April 5, 1902, on account of my wife's sickness, and therefore no further record could be kept. Pen 2 began to lay the second day of the Chicago show, Jan., 1902. The two pullets began laying Jan. 22, 1902. The balance of 128 eggs noted in remarks of pen 2 were used for my table, as I had no further calls for eggs for hatching at that time.

I feed in the morning mash, which is moistened in skimmed milk and fed warm in troughs; average feed for pullets one full quart to every twelve (dry measure), a trifle less for old hens. The Leghorn pullets were fed same ration as for Wyandotte pullets. If necessary I feed a second time. Take up all feed that is left.

Noon feed green food, and green cut bone four times per week, one-half ounce per hen; an extra feed to male in pen. Sometimes a light feed of mixed grain in litter.

Night feed mixed grain from mixture of two bushels each of wheat, oats, buckwheat, and corn.

Composition of mash, viz: 1 bu. corn, 2 bu. oats, ground fine; to each 200 lbs. of this mixture add 70 lbs. bran, 30 lbs. clover meal, 6 lbs. beef scraps.

Ratio of mash 1:5.1; potential energy of 96 calories per oz.

States. Their record up to May 1, 1902, is as follows:—

Value of eggs, pen 1.	\$42.94
Value of eggs, pen 2.	13.50
Value of chicks sold.	13.80
	\$70.24
Value of Leghorn eggs.	5.55
	\$75.79
Cost of food, grit, straw, etc., from Nov. 1, 1901, to April 30, 1902.	19.00
	\$56.79

Will the editor of FARM-POULTRY, through his columns, please inform me if my method is good, bad, or indifferent, and if egg record is good, and also if ratio of profits per hen for the above time specified would warrant the labor and money expended. I also would like the editor's private opinion on the two ratios, and also if in his opinion I could get more eggs by feeding the 1:4 nutritive ratio ration.

Chicago, Ill. S. E. LANE.
2512 W. Lake St.

If Mr. Lane noticed what was said in "Editorial Notes" in May 1 F.-P., he found there my opinion of the quality of the teaching which promulgates rations of special ratios for different breeds. The article to which he alludes was one of those to which that editorial reference applies. I have no reason to suppose that he would get better results by using one of Mr. Shackleton's scientifically

compounded rations. The ratios of the ration he used are more nearly those determined by skillful feeders, in practice and without reference to calculated values.

Mr. Lane, as I infer, compounded his ration about as per formulas in "Poultry-Craft." The standards given there were determined by calculating rations, the real value of which had been established by practical tests. It is quite likely, in fact I should regard it as altogether probable, that Mr. Shackleton, if a skillful feeder, or any other good feeder using a narrow ration as he prescribes, would get as good results, other conditions being equal with the narrow ration as with the wide one; but as I said I know of no reason to suppose that they would get better, and as a rule the narrow ration is more expensive.

My "private" (?) opinion of "scientific" speculations, experiments and reports on feeding, is that to date most of them have been either rank nonsense or superfluous. I have for some time regarded the chapter on science in feeding in "Poultry-Craft" as one that would, on the whole, have been better omitted. I take this view now because as I began to hear from readers of the book I found that just the readers who ought to read, study and follow the preceding chapter on practical feeding and let the so-called scientific side of it alone, were the ones who interested themselves in the supplementary chapter.

I had anticipated that such might be the

case and attempted to offset, if possible, that tendency by beginning the chapter on "Science in Feeding" with this plain statement:—"Purely practical knowledge and skill, enough for ordinary use, can be acquired without study of the science of feeding. The simple instruction which helps to a common sense understanding of the needs of an animal organism, and plain knowledge of the properties of the staple poultry foods, is enough for most poultry keepers—enough for all as long as only familiar articles are used in approved combinations."

Plain as it was, that statement did not have the desired effect. People without practical knowledge try to begin on a basis of "scientific" knowledge of the subject, which is not, and in my humble judgment never can be—unless the science is different than that of today—"the real basis of a thorough practical knowledge of poultry feeding. Unquestionably it sometimes happens that a knowledge of the components and relative value of food articles would come handy, but such contingencies are too remote to require that necessary provision for them be made.

I have not given Mr. Shackleton's articles a full and critical reading, but have read enough of them to see that while they contain much that is good and useful, they also contain far too large a proportion that is neither the one nor the other.



FLOCK OF BREEDING GEESE, OF MR. HORACE DYER, LITTLE COMPTON, R. I.

This cut and that on the opposite page will give a fair idea of the kinds of geese used. The flocks generally contain a mixture in which African blood is conspicuous, many of the males being pure or high grade Africans.

A Poultrywoman's Views.



EDITOR FARM-POULTRY:—

Thank you for your kind advice and interest in us. We will keep on advertising, and wait until we get a place to suit us. In the meantime, whatever our hands find to do we will do with our might. Mr. Phillips is at work on a nearby poultry plant, and I have a 100 egg incubator and a brooder.

I set the incubator with 100 Barred Plymouth Rock eggs, tested out 25 infertile, and hatched 67 chickens, which are in brooder in an open front shed. They are now four weeks old, and all alive and strong yet.

I too have had experiences in buying eggs. I bought three sittings from one party from which, set under hens, I got six chicks. The rest of the eggs were infertile. From another party I bought two sittings and hatched fourteen chicks, one Brahma, one Buff Cochins, three White P. Rocks, and the rest Buff something; all out of warranted Plymouth Rock eggs. Well, I'm not discouraged, and I don't think all breeders disposed to be dishonest, and I am going to try again, and have set the incubator with another hundred eggs, Plymouth Rock and Brahma—perhaps.

I have read your advice to a beginner about to purchase, and feel interested in that lady, and would like to say to her that it would not be well for anyone with no experience in poultry to invest all their capital in it, and depend on the proceeds for a living, unless they did something else at the same time to bring in an income. Of course, to our certain knowledge some of the best poultry breeders

are women making a good living, but they gradually worked up their stock, learning experience at no great cost as the experiment progressed.

And so much depends upon the woman herself. Some women are so much more practical than others, more business like more careful of details, with lots of go ahead in them. This means much in the poultry business.

I have been in the poultry business seventeen years, and would advise a woman who wished to start in it to begin in a very small way, if she had no experience, and not to depend upon it entirely for a living unless she has some assurance that she is the woman that can make it pay.

Mr. Church does not seem to think much of the poultry business or of so called professional managers, and thinks those that dance must pay the fiddler. Well, Mr. Church, don't you think that if one tries to fiddle and dance, too, and doesn't know how to do either, he generally makes a bad job of both? But, try again, Mr. C. Energy, pluck, stick-to-it-iveness, and luck make four good leaves for the poultryman's clover, and if we don't have the first three leaves we can't have the last leaf, which is the one we want most.

Brother Journeyman Poultryman thinks one ought to have all the labor saving devices possible in the poultry business. Well, it is very nice to have them if you can; but I have raised 1,500 spring chickens and 1,000 fall chickens in one season, and have done my work for four in the family, and that without one labor saving device,—and I am only a woman.

Mrs. MARY F. PHILLIPS.
Easton Center, Mass.

Mrs. Phillips will doubtless have noted that Mrs. Church has rescued Mr. Church from the difficulties in which with the assistance of such poultry managers as he had he became involved.



BABY GEES.

Part of a flock of about one hundred goslings a few days old, seen on the farm of Mr. Abel Simmons, Little Compton, R. I.

GOOSE GROWING IN RHODE ISLAND.

Where It Is a Profitable Branch of Poultry Culture.



IN CONCLUDING the second of the articles on colony poultry farming, in the issue of this paper for Dec. 1, 1901, I made a brief allusion to the goose-growing industry carried on in connection with it, giving at the same time some figures of interest to persons attracted by statements of profits from poultry. As the goose industry is limited to the spring and early summer, with nothing doing between times except to give those retained for breeding purposes a chance to live—a suitable place to pick a living, there was nothing to be seen in connection with it at that time. Hence a second visit was necessary, and was the more readily undertaken because it would give opportunity at the same time to make still further observations of the methods of colony poultry farming.

I had been directed to go first to Adamsville to see Mr. E. A. Cornell, the largest buyer and fattener of geese in that section, who handles 12,000 to 15,000 geese, and who, I was told, could direct me better than any one else as to the farms most worth while to visit. It was on Mr. Cornell's farm that the very serious outbreak of goose cholera, reported in the Rhode Island Agricultural Experiment Station report for 1901 occurred. This cholera visitation took place in the fall of 1900, and caused a loss of something like \$5,000 to Mr. Cornell. At the same time a similar epidemic occurred on the farm of Mr. W. O. Snell, of Little Compton, who handles about 3,000 geese a year.

I found Mr. Cornell at home, and giving more attention to chickens than to geese, of which he had then but about a score on the place. These were goslings six or seven weeks old bought a few days before. Mr. Cornell has never grown the geese himself, his business being buying, fattening, dressing and marketing the product of the goose growing farmers of the district, and also fattening lean western geese, which were bought in New York city, shipped to Adamsville, fattened, dressed and shipped back to New York to go into consumption there.

The loss mentioned had been a heavy one. Almost as bad was the loss occasioned last year by the rise in prices of grains, this occurring when he had on hand a very large stock of goslings but partially fattened. He estimates that the rise in the price of grain caused a loss to him of about \$3,000. With two such losses in two succeeding years a man could hardly be expected to be in the mood to accumulate a large stock of goslings for fattening, at such prices as have obtained in recent years, it being quite certain that the cost of fattening this year would be greater than last, when lower prices for grain prevailed early in the season, and uncertain whether a correspond-

ing increase in the price of geese would be obtained, or if reached would long continue.

Such being the case, Mr. Cornell was in a waiting mood, not at all disposed to bid up prices for early goslings, but rather inclined to hold off buying until prices were established, and then to buy or refrain from buying as appeared to be the best business policy. He has a large plant here for the fattening and handling of goslings and of course does not want it to lie idle if that can be avoided. At the same time there is no object in doing business at a loss. After telling something of what I found among the growers of goslings there will be occasion to refer again to the matter of the relation of the grower to the fatterer, and of this to the industry itself.

A cordial invitation to dinner was readily accepted, and while we, especially the editorial



BREEDING GEES IN PASTURE WITH COLONIES OF R. I REDS.

On Farm of Wm. N. Sisson, Little Compton, R. I.

we did justice to the good things with which the table was furnished, the conversation naturally proceeded along lines giving me an insight into this business as seen from the middleman's standpoint. Mrs. Cornell seemed quite as familiar with the subject as her husband, with a better memory for dates and figures, be often appealing to her for such data.

I shall say nothing in particular at this time about Mr. Cornell's plant. That can be more appropriately described in a special article written from observations of the plant in full operation, and such an article I hope to be able to give readers of F.-P. before this year is ended. As to individual goose growers whose plants were most worthy of a visit, Mr. C. said it would be difficult to make distinctions, for practically everyone in the Little

Compton district was engaged in goose growing, and conditions and methods were everywhere very similar. He suggested that the best thing to do was to drive about, stopping wherever I found anything that especially interested me. Many of the places I had visited last fall to inspect the poultry, he said, would also be found among the most interesting in geese. So bidding good-by to Mr. and Mrs. Cornell, I proceeded to dip into the problems of goose growing.

The breeding geese in this section are generally kept in pastures which are frequently used also for cattle, and sometimes for poultry as well. These pastures are mostly low, somewhat swampy, often well provided with ponds and small running streams, and frequently so full of boulders that the use of the land for cultivation or for mowing land is out of the question. They vary in size, but even the smallest give ample room and pasturage for the number of geese kept, the breeding stock rarely exceeding twenty or thirty. In a small pasture they will generally be found in one flock, but where there is more room each gander, with his mates, is likely to appropriate a particular part of the range, and these family groups keep to themselves most of the time.

No shelter whatever is provided for the breeding geese—unless we except the barrels sometimes placed for nests. The geese, however, when they come to deposit their eggs, are quite likely to ignore these barrels, and make their nest on the ground among tufts of coarse grass or low shrubs. They seem to prefer to locate the nest near the water. In some instances, I saw nests made only a few feet from the barrel provided for that purpose.

I was eager to get a photograph of a sitting goose on her nest, but though constantly on the lookout for such a subject, and though I made several attempts to get near birds found on the nest, I never could get near enough to one to care to take the risk of spoiling a plate.

The food of the breeding geese is mostly grass. Some growers keep grain standing where they can get it at any time. The geese kept in pastures with hens are sometimes allowed to eat with the hens; again the hens are fed in the houses where the geese cannot approach the food.

Throughout the early part of the season the eggs are given to hens, it being desirable to keep the geese laying as well as possible. The

Black Minorcas

High class Single Comb Black Minorcas, farm raised 12 years for prolific layers of the largest white eggs. Special prices for eggs the remainder of season. Stamp for catalogue.

Mrs. GEO. E. MONROE,
Box A, Dryden, N. Y.

Winners at Boston, Pan American, New York.



\$100 for 50cts

That's what you get when you buy our new book entitled, "Little Chicks." Everybody needs one. Circular free.

EXCELSIOR WIRE AND POULTRY SUPPLY CO.,
Dep't 1, 26-28 Vesey St., New York City.
W. V. RUSS, Prop.

SPRING GROVE FARM.

S. C. WHITE LEGHORN, BARRED PLY. ROCKS, SCOTCH COLLIES. Specialties.

Eggs from vigorous farm raised stock. Choice selected utility fowls. Rock, Leghorn and Pekin eggs \$1.50 a sitting. Geese eggs 25c. each. See exchange notice in Feb. issue.

W. HAHMAN, Box 3, Altoona, Pa.



OAKES Lamps and Regulators are the standards for others.

Oakes' Hydro Safety Lamp 15c to \$2.70.
Oakes' Imp. Wafer Thermostat, \$1.25.
Oakes' New Aluminum Regulator.

All kinds of incubator and brooder fixtures. Write for free catalog and special circulars.

L. R. OAKES, Mfr. No. 1 6th Street, Bloomington, Ind.

85c for 100 Sq. Ft.
Caps and Nails.

SWAN'S Felt Roofing
Extra Heavy
Fire, Wind and Water Proof. Samples free.
THE A. F. SWAN CO., 116 Nassau St., N. Y.

In a Victor Incubator always yields a vigorous chick. Simplest, most reliable, cheapest, first-class hatcher is the **VICTOR** INCUBATOR.

Thousands in use; we pay freight, catalogue 6 cents.

GEO. ERTTEL CO., Quincy, Ill.

Keep In Mind

That chicks bred from the winning S. C. W. Leghorns at Philadelphia and Boston are bound to win in their turn. These are to be found at

The Woodlawn Poultry Yards,
CHAS. J. FOGG, Prop., WALTHAM, MASS.

SQUAB BOOK FREE

Squabs bring big prices, are raised in 1 month. Take only spare time. An eager market and astonishing profits. Easy for women and invalids. Steady home income. Small space and capital. Here is something worth looking into. Facts given in our **FREE BOOK, "How to Make Money With Squabs."** Address: **PLYMOUTH ROCK SQUAB CO., 19 Friend St., Boston, Mass.**

BUFFINTON'S BUFFS.

We will sell eggs from No. 1 prize stock of Buff Wyandottes, Buff Leghorns, Buff and Barred Plymouth Rocks: Rose, Pea and Single Comb Rhode Island Reds, \$1.25 for 13; \$3 for 40; \$6 for 100. Partridge Wyandotte and Partridge Plymouth Rock \$2 for 13; \$5 for 40; \$10 for 100. Incubator eggs from utility stock of R. I. Reds, Buff Wyandottes, Buff Leghorns, Buff and Barred P. Rock, \$3.50 for 100; \$6 for 200. Send for circular.

ROWLAND G. BUFFINTON,
Box 677, FALL RIVER, MASS.

PINELAND
Incubators & Brooders.

1881—They led then.
They lead Now—1901

—THAT'S ALL—
Concise Catalogue from

Pineland Incubator and Brooder Co.,
Box D, Jamesburg, N. J., U. S. A.

goslings, the hatching is quite a chore, for each hen, as a rule, will cover but five eggs, and some are given only four. When the same grower at the same time is trying to hatch anywhere from one to two thousand chicks, all with hens, it is easy to see that however it may be at some other seasons of the year, at this season those who have the care of the poultry find their time quite fully occupied. Mr. Wm. N. Sisson, at whose farm I passed the night, told me that during the hatching season he usually had to give two full days a week to the sitting hens in addition to time given them daily, the extra time being required for preparing nests, cleaning dirty nests, selecting eggs, etc. The time given them on other days, however, is not considerable, and I presume that on the whole the chicks here are hatched more cheaply than they would be in incubators.

When taken from the nests the goslings are generally kept with hens for a few days. They soon grow away from them. It must be highly unsatisfactory to the hen that hatches out goslings to spend a period half as long again as is natural for her incubating eggs, the "chicks" from which do so little to satisfy her motherly instincts. It seems, too, as if the gosling resented the imposition of so insignificant and unsuitable a mother, for those hatched by a goose appear to thoroughly appreciate her maternal care as well as the fatherliness of the gander, and the goslings invariably seem to have a great deal of affection for their keepers,—the sources of the supply of grain food and of water.

Methods of handling the goslings are thoroughly primitive. Very few "appliances" are needed. When the goslings are first put out with a hen, the hen is often tied to a coop, such as is used for a hen with a brood of young chickens. At one or two places small pens were made by setting boards a foot, or less, wide on edge, securing them in place with short sticks driven into the ground, and in these the hen with the goslings had liberty. As stated in the article describing goose culture at de Wolf Farm, the goslings begin to eat grass from the first, and require a great deal of it. They have to be moved frequently, and as they require close watching while small, must be kept quite near the house. Hence you will at most places find the smaller goslings on the grass in the house yard, or in small fields adjoining the barns or other out-buildings.

Like ducklings, if permitted to do so they would remain outdoors the greater part of the night. For warmth while small, and for absolute security then and later until quite well grown the keeper must drive them into the coops at night. At one place, the farm of Mr. Abel Simmons, there were nearly a hundred goslings only a few days old in a small enclosure, which were every night put in boxes and put under cover, no hen being with them. This would be continued for only a few days. The older goslings were kept in coops of the same sort as used for chickens. At Mr. Simmons' farm there were several older flocks in a small field some distance from the house, the field being divided in three by low wire fences, and each size of goslings having its own yard.

After many inquiries about food I came to the conclusion that there were almost as many variations of method as there were growers. Some fed a quite dry dough, some fed a very sloppy mixture. Most growers preferred to mix the ground grain stuffs with milk when that was obtainable. If there was a difference in favor of any one method or class of methods it was not observable to a casual visitor. The goslings as a whole seemed to be thrifty; those fed on a sloppy food quite as thrifty as any. Occasionally I would see a flock of goslings, with "a lean and hungry look," and these were as likely to be of those getting dry feed as of any others. They were generally those short of grass. It doesn't take a flock of forty or fifty quite small goslings long to strip the grass from a good sized plot of ground, and if anything happens to delay their removal to a fresh pasture they begin to go back.

Hatches were reported not quite as good as usual this year, and losses rather larger than usual. Many could give no reason for such conditions. One grower who will have about five hundred goslings said that his had not

done nearly as well as usual, and he was convinced that it was because the breeding geese were getting too old.

The goslings are ready for the fatter at about two months of age. Few, if any, of the growers fatten their goslings. Mr. Cornell thinks it would be better all around if growers would try to make their goslings more nearly fit for killing before disposing of them, or if the buyers would take none but fat or well conditioned goslings. From his point of view, as things are now, with the growers often not disposed to feed grain as much as is necessary to put the birds in marketable condition; and with buyers bidding up prices on unfinished goslings which they have to feed for some weeks, there is not an equitable division of risks and losses between the grower and the fatter.

If there were no danger of such loss from disease as Mr. Cornell and Mr. Snell had from goose cholera two years ago, the fatter, provided he did not pay too much for his goslings, would make more by fattening and killing than by simply buying to dress and sell again; but if the goslings were never detained long in the middleman's hands his risk in handling them would be only the usual risk due to fluctuations in price. There is, comparatively speaking, no risk in fattening the geese in small flocks on the farms where they are produced, while when they are brought together in large numbers, and held for weeks while being fattened, the risks are enormous, and if a contagious disease is in anyway introduced into such large stock, the difficulty of using



GOSLINGS DRINKING.

From a Snap Shot taken at Wm. N. Sisson's. The goslings are about a month old.

curative and preventive measures is so great that before the epidemic is checked, losses are inevitably very heavy; while contagious diseases in isolated flocks are more easily handled, or if they do not yield to treatment, can at least be prevented from spreading to other stocks.

The grower's idea is to get the goslings off his hands as early as possible, and at the best possible price. If conditions are to be changed it seems apparent that the change must be brought about by some sort of agreement of action on the part of the buyers. As things have been, the industry has been profitable to the growers, and also to the fatters. A change to what Mr. Cornell would consider a safer basis for the latter would seem to an outsider to be in the end advantageous to both. We shall watch conditions with interest.

Now as to growing geese elsewhere. Goose growing is a branch of poultry culture in which more people ought to be interested. Farmers who have land of the kind described as in the pastures over which the Rhode Island breeding geese roam, could not well use it to better advantage. The Rhode Island grower generally averages over a dollar a head for his geese sold to the fatter. The demand for good geese has not yet been supplied, and considering the history of the development of other branches of market poultry culture, it is safe to say that even a boom in goose growing would not make an overproduction that would be long continued. The demand for a superior product generally grows faster than the supply.

Near any of the large eastern markets goslings can be expected to bring prices approach-

ing those received by the Rhode Island growers. In the west and south prices are lower as a rule—but so is cost of production. Whether the difference in cost is such that the western or southern grower could make as much profit per gosling, or on the flock, or on his labor and investment as does the Rhode Island grower, is a question I shall not attempt to discuss here. I think probably he could not, but that does not necessarily imply that it would not pay him to grow geese. Goose growing in Rhode Island is but one branch of general farming in which poultry, hens, and geese is proportionately more important than elsewhere, and yet the farm is not "a poultry farm." The farmer elsewhere may have, generally does have, some other branch of farming from which he can derive more profit than the Rhode Island farmer could. In many places he can grow grain cheaper and more profitably. The Rhode Island farmer cannot compete with the western farmer perhaps on growing corn, but he does not, therefore, wholly neglect corn. He tries to make such a diversity of interests on his farm as will make his operations, as a whole, most profitable.

One man gets a larger proportion of profit from one thing, another from another. On the farm more than anywhere else it is unwise to let all one's resources and energy go into that branch which when only a branch gave the most profit. The safe way is in a diversity of interest, and it is always well to try to develop resources. A man or woman who has a place suitable for geese and who could keep geese profitably ought not to be deterred

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At Haverhill, Mass., Dec. 10-13, 1901, Hawkins judge, I won 1st (924) and 2d cock; 1st (94) and 2d hen; 1st (94), 2d and 4th pullet; 1st (93) 2d, 3d and 4th c'k's; 1st pen; Silver cup for best display, and many specials.

At So. Framingham, Dec. 8-6, 1901, I won 1st c'k'l, 1st cock, 1st pullet, 1st pen; Silver cup for best two males and five females, and Silver cup for best display in the whole Am. class.

EGGS from 10 grand pens, 5 mated for exhibition cock's and 5 for exhibition pullets, \$3 per 15; \$5 per 25; \$7 per 40; \$10 per 60; \$15 per 100. I guarantee the safe arrival of eggs and a good hatch. Send for folder giving a description of my pens for 1902.

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Fattening or Fleshening.



EDITOR FARM-POULTRY:—

If you will kindly permit me I will supply the authority for the description I gave of the English market requirements for table poultry, which you say you are unable to find, and therefore assume they do not exist. First, however, you quote Mr. Brown; please read your quotation carefully again, and notice that he says: "Of course a certain amount of this (gain) would be surplus fat laid upon the intestines and around the various organs of the body." He does not say there is any laid under the skin, neither can any such inference be drawn. The half-tones you reproduce show well fattened (finished) birds that there is surely no fat visible under the skin in layers, or Mr. Brown would never have selected them as fit specimens to photograph; nor would they have been entered in any prize competition. What you see there is edible meat. I can make all allowance for the wrong conception the American eye would have on seeing the picture, and it is the result of our misapplication or our misunderstanding of the term, "fattening." Our people can't realize that birds presenting such a plump appearance can be made up of any other material than fat.

There is probably no better authority in all Europe than Mr. Lewis Wright, and I believe no one in any country is so thoroughly conversant with every phase, detail, and branch of the poultry question as he. He is at present engaged in writing up the subject for the Encyclopedia Britannica, and no one is more competent. Read what Mr. Wright says on the subject, in describing a visit among the Sussex fatters:—"We found a good many fatters even in Sussex who seemed insufficiently acquainted with what may be called the practical science of feeding. Most know better, but some seemed to endeavor to get as much food as possible through the bird, so long as the latter would stand it, or did not go wrong. The result is, that when a bird so fed is trussed, a great deal of internal fat is found, as well as deposits of mere fat under the skin. *Flesh evenly infiltrated with fat is the great object*, (the italics are mine), and any surplus (feed) can only form fat. This makes the bird heavy in hand, but in the end the sender gradually loses reputation for 'quality,' and his price suffers." Mr. Wright says further:—

"Another quite cardinal point is evenness of flesh, free from deposits of yellow fat clearly visible under the skin, the latter at once stamps the bird as badly fed and coarse. Really good and even feeding shows specially upon the back, which should be well covered with lean meat. So reliable is this sign of good feeding that in France fowls are often exposed for sale with the back uppermost, if that is well covered with meat, the breast is nearly sure to be so." To show further how "visible fat" is rated, I give you Mr. Wright's idea of what the division of points should be in the dressed poultry score:—

Size and weight,	20
Straight breast,	10
Length of body,	15
Breadth of body,	5
Evenness of flesh and freedom from fat,	15
Skin and color,	15
Fineness of bone,	10
Touch,	10
	100

This is perhaps sufficient evidence to support my assertions as to what the European markets demand, and it goes without saying that the "quality" of such poultry is a thing the American palate is not familiar with, and I insist it is the same old "yellow scum on the milk." We are going to get used to it, and that right quickly. We are going to get a taste of "quality." Mr. Wright, in a letter to me last March, again says: "I do not think the American people realize fully that the standard of the table poultry flesh here differs from yours. Our fatters try for a smooth whiteness, which you do not, and our feeders get it from long experience with feeds." In another letter he says:—"If you can educate the American palate to white meat, you can at

least open a market to a superior article at a gilt edge price besides the steady market for the other style."

The misuse of the term "fattening," which should be fleshening or finishing, has always started us on the wrong track. The term as applied to fattening geese from the building of the pyramids down to the present time is appropriate, as grease is the great object desired, and the same term has always been applied to the process regardless of the feed used, or the result desired with all other fowl, but with chickens it must not be so understood, as "visible fat" is the thing to avoid. There may be some people who can eat it; I have never seen any, nor would it seem from the foreign requirements that these people eat it. The big packing houses are making a strong effort to secure both foreign and home markets, and it will not be long before they will have the home market well in hand. All they lack is proper feed, and men to feed it intelligently; they have been experimenting for several years, but the results have been the inevitable fat, and the consumer won't have it. All the fancy brands and tin tags will not change the quality or delude the buyers.

I think you will admit that if your argument

In the January 15, 1898, issue of F.P., I published a comparative study of the various reports of the poultry exhibits at the Smithfield (Eng.) Dead Poultry Show in 1897. The reports studied were those published in the *Feathered World*, the *Live Stock Journal*, *Poultry* (all English papers), and *Chasse et Pêche*—a Belgian paper. A few extracts from these reports will show who is right and who is wrong about visible and invisible fat.

"The improvement in quality, too, is most marked, and, allowing for the difference in national taste, many of the exhibits in the British section, though not attaining the exquisite whiteness of flesh of the best French exhibits, fattened on a diet of buckwheat meal and milk, or presenting so marvelous a quantity of almost lard like fat evenly laid on, yet for size and meat properties suffered little in comparison with their foreign competitors."—*Feathered World*.

"The French fowls were shown, as customary, back uppermost, tied with ribbons, shaped up according to varying local custom, and many tufts of feathers left at the tails, and head feathers out. One and all displayed the extraordinary even layers of white fat which distinguished them from British exhibits. The whiteness and firmness of flesh was also marked."—*Feathered World*.

"The La Fleche, especially, were beauties, admirable and admired; the art of fattening



GOSLINGS GRAZING.

From a Snap Shot taken at Abel Simmons'. The goslings are about three or four weeks old.

were to prevail, we must not only assume our Standard to be the best, but also that what I have shown clearly to be the European Standard, and the logical and superior one from every standpoint is unattainable here. Now if you will pardon what may appear to be an attempt to blow my own trumpet, I will let Mr. Roots, the manager of the Mary R. plant at Counersville, Ind., present his evidence as the result of one intelligent attempt at this "quality." In February, Mr. Roots put up six hundred capons to finish or fatten on a special meal that I sent him, reserving a few, however, to fatten by his accustomed method. They were trough fed, or what would be better described as half fat. On March, he writes as follows:—"I ate two capons, one fattened largely on the grain diet, which was covered with yellow fat, and was a fine looking bird. After it was cooked, there was not much of it, and the meat was not as tender as it should be. The bird fattened on your feed had very little apparent fat on him. When it was cooked it had lost but very little in size, and I could take a fork and cut a piece of the breast meat across the grain, and not have to bear very hard. There is not a thing in my mind but that you have struck the right food preparation."

Now if this is not "quality," what is? Personally I am anxious to see the packers succeed in foreign markets, and the more they ship out of the country the better for the producers, but when they do I want to see the American hen perched on top, and not be graded as soap grease. We have given the Englishmen a lively chase in everything else, and when we set out to outdo them in table poultry, we shall succeed; but to begin with, we must get a true meaning of this word fattening, and the rest will follow.

H. E. Moss.

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REDUCTO

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WHITE ROCKS, HOUDANS, EGGS.**

which were variously described as "plump, without being fat," "free from superfluous fat," etc. As the correspondent of *Poultry* said, the excessively fat birds had the preference.

I don't think Mr. Moss and I will quarrel about the Americans not wanting this excessively fat poultry. On that point we seem to be in substantial agreement. Where we disagreed was on what was called *fat* poultry in England and Europe. He quotes Mr. Lewis Wright as to what he (Mr. Wright) thinks *should be* the scale. I have given the testimony of several competent authorities as to what *is* the standard for exhibition poultry. He tells us that the picture represents "fleshed" poultry; that what we see in the cut is flesh, not fat; that we "can't realize" this, etc. I think I have furnished the necessary proof that what we see in the picture is fat.

Of course it is four years since that show. Things could have entirely changed in that time. I have, however, no reason to suppose that any radical change has taken place, and I watch the European papers pretty closely for everything of that kind.

Mr. Wright, while an interesting, and on the whole an instructive writer on poultry topics, is apt at times to take it for granted that developments which he would like to see take place have advanced very much further than they really have, and, as we saw several years ago in his discussion of American judging, sometimes builds a very high edifice on a

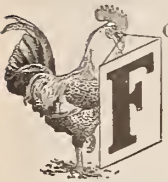
purely imaginary foundation. Not that I would intimate that Mr. Wright's observations as to fleshed or fattened poultry had no real basis. On the contrary I think he is wholly right in his position as to what is most desirable, and I have no doubt that some such fowls are produced, and many more might be; but that Mr. Wright's standard is the accepted and popular one, "does not yet appear."

The case seems to me to have a partial parallel in conditions with regard to the requirements of an ideal standard for thoroughbred fowls. The desired thing is often rarely seen in perfection, and the thing the standard calls for is often ignored by the judges. I have a very strong suspicion that if Mr. Wright were to come to America and see some of our best corn fed poultry, his first impression would be of surprise that it was not as yellow as he expected to find it. He would not be the first who had received that impression.

It may be very rash and presumptuous in me to take such a position, but on such evidence as has so far been presented, I am still ready to maintain that we have no reason to yield to foreign opinion as to what constitutes good poultry. Unless Mr. Moss can show that standards—as shown by the judging—and conditions in England and Europe have been radically changed within the last four years, I think he will have to admit that he has not proved his position as to what he asserted was the European standard. Mr. Wright's testimony is not at all decisive.

SUGGESTIONS FOR SUMMER.

Points in Practice, and Matters for Study.



FORESIGHT "is better than hindsight," says the old proverb. Foresight is generally thought of as an exceptional quality, while hindsight seems to be assumed to be common to all. But is it not a fact that those who exercise the wisest foresight are those whose hindsight—whose review of each past experience has been most thorough?

To simply look back over events and see that certain things happened so is a very superficial sort of hindsight. To consider them thoughtfully, discovering the reasons why things turned out as they did is practical hindsight, and it is such hindsight which must be the basis of all profitable foresight. So a lack of foresight is simply due either to a lack of experience or to failure to draw the useful, practical lessons from such experience as one has.

Said a poultryman who used to farm out some eggs for hatching every season (I think he has discontinued the practice as on the whole not a profitable one), "T. is one of the best men I ever saw to keep chicks growing through the spring, but as the season advances his chicks seem to go back, and by the time I am to take them in the fall there is hardly a bird in the lot of any value for show or breeding purposes."

The trouble was that T. crowded his chicks too much. He had only a small place. In the spring he hatched all the chicks he had room for, and gave them the best of attention. As the chicks grew they began to be crowded, but as long as the weather was moderate—and especially while the nights were cool, it did not hurt them much. When these conditions passed and real summer weather came T.'s chickens "went all to pieces." Their plumage began to look rough. They lost their sprightly active ways. Their appetite failed. Perhaps some of them died.

T. would attribute the trouble to a number of things, and for a little while would work industriously to correct it. He would treat them for lice. He would change the food. He would give them doses in drinking water or food. Sometimes these things seemed to give temporary benefits, but their effects were short lived because they did not go to the root of the matter; all they did was to relieve some conditions resulting from it.

Finally T. would reach the conclusion that, as it was none of the things for which he had given treatment, it must be the hot weather, and at that point he practically gave up every

time, each year becoming more firmly convinced that it was useless to expect the chickens to keep growing through the summer.

If he had at the start made or had made for him a correct estimate of the capacity of his plant—of how many half grown chickens it could carry and have them do their best, and in hatching had limited himself to this number, plus a small per cent allowed for possible losses, he would have avoided most of his trouble, and would probably have had success in which he could take pride. But every year for several years it was the same old story of overstocking early in the season, crowding and sickness and stunting of the chicks later, and a disgruntled and discouraged poultryman. It went on this way for some time, and then T. went out of poultry temporarily, and shortly afterward moved to another place, where I understand he keeps chickens, with what success I do not know.

The story of his experience would be of little interest if his experience were not a common one. Overcrowding is one of the great mistakes made by poultrymen, and it is not as uncommon among those whose experience, measured by years, is long, as it should be. Some readers may think I am getting to be something of a crank on the subject of giving fowls and chicks lots of room. I rather think so myself. I see so much crowding, and so much of it absolutely useless and unnecessary crowding, and see the effects of it published so plainly in the flocks subjected to it, and in the discouragements and losses of those who practice it, that sometimes I wish some one would evolve some salable idea or article the exploitation of which would in some way lead them into a campaign against overstocking poultry plants. The man who has something to sell can put so much more enthusiasm into his arguments, and is more often able to impress people to the extent at least of giving his goods a trial. The man whose business it is to try to give sound advice has to avoid even such exaggerations as are regarded legitimate in pushing sales. The result is that his arguments take longer to bring results. If his advice is not relished because it does not fit the poultry keeper's plans, it is disregarded until in his endeavors to learn why his plans failed the poultry keeper perhaps remembers it, and in his next effort makes use of it.

I once knew a very devout farmer who fell headlong from a load of straw one day and broke both wrists. The first thing he said when the extent of his injuries had been ascertained was:—"Well, I said the other



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day that I wished something would happen to let me out on the corn husking this year, but I didn't expect the Lord would take me at my word."

What recalls the incident is the fact that the first part of this article had to be laid aside for a few days, and in the meantime came the letter from Mr. Powers, given elsewhere in this paper, with a newspaper clipping in which the fresh air teaching was carried to the limit. I don't suppose there was any more interposition of a higher power in this incident than in the case of my old friend who had his wish in regard to corn husking. Nevertheless the coincidence is useful to me. I have no further desire to see salesmen exploit that matter. This case shows how easily ill considered advocacy of an idea may lead people into errors of opinion and often of practice which the advocate never intended nor anticipated. And this was not the case of a salesman, but of an enthusiastic student, who I fully believe, would not willingly mislead anyone. So as far as I am concerned I "settle down" to the conviction that the best way to present and urge such reforms is to do it with reasoning that will stand investigation. Results that way may be more slow, but will also be more sure and on the whole more satisfactory.

As a practical test of this matter of giving fowls room, I would like to urge those who are not convinced of the advantage of it to try a few experiments with chicks from the same lot under different conditions,—if convenient crowding some, giving some what they now consider ample room, and giving still another lot twice as much room as the second. I would also suggest that they mark all birds used in the test and observe and compare results after maturity. Comparisons of growth alone are insufficient.

Give the chicks room, and if possible give them a grass run so large that the grass will be neither trodden nor eaten down, and the droppings of the chicks will not be everywhere in evidence. If at any time your chicks that have been growing finely seem to stand still, and no other cause is discerned, consider whether it is not possible that they have outgrown their accommodations, and if that seems at all possible either give more room or reduce the flock. Try for one season to avoid crowding, and put off forming final conclusions as to results until the beginning of the next season.

When real warm summer weather comes hens that have been laying for from three or four to six or seven months are quite likely to slack up. If they do, the poultryman before deciding what to do with or for them should endeavor to get a correct idea of their condition and of the possibilities still in them.

If they are valuable breeding hens and are to be used another year, the best treatment is to give them good range and good feed and an airy roosting place. If this is done a considerable proportion of them will, generally, take a short rest and then lay quite steadily, though perhaps not heavily until cold weather.

Hens kept only for layers may be given somewhat similar treatment in their regular quarters. When they seem to need a rest, let them rest for a little while. A few weeks of idleness early in the summer will not hurt them, nor will it mean any ultimate loss to you, unless you make the mistake of neglecting the hens that are resting. Give them the usual good care and plenty to eat, but make the ration with a little less grain and a larger proportion of fresh green stuff. You may not have noticed that the hens look faded and jaded, or if you noticed it may have thought that was the common appearance of all hens at this season. It is of many flocks, but not of all. It ought not to be the appearance of any flock as a flock, at any season of the year. With rest and a change of diet you will soon

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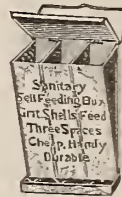
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notice that the hens begin to look brighter and livelier. Now if you want eggs, increase the grain ration gradually, see that the hens have good shade, good air, and plenty of good cool water. Be satisfied with about a thirty per cent egg yield while warm weather lasts, and when cooler days and cool nights come, feed the grain "into them;" and if they have the constitutions and the productive power they will lay for six or eight weeks as they did in the spring, then will slack off a little, and as winter begins will go into full molt, and most of them quit laying until the new coat of feathers is complete.

There will be exceptions. Some hens will molt early and lay in early winter. Most hens, though, are disposed to molt late. The time of molting does not make as much difference as some people suppose.

Gapes—Cure and Prevention.

In this garden spot of the world one of our drawbacks in raising chicks is gapes. I believe all of eastern Pennsylvania, parts of Maryland and Virginia are troubled with the pest. There are a few small lots with us, free from them, but very few if any of the old farms are free. My father lived at three different places since I remember the world, and they all had them about as bad as they could be. I will not go into any theories, but give what I know to be a few absolute facts.

The first is, with early chicks, that is, from when the ground first thaws until it dries in midsummer, is the worst time for the poultryman.

The second fact is, they get the gape worm or egg while running on wet ground, or damp ground. I believe it has been proved beyond a doubt the earth worm acts as a medium to keep alive and to convey to the chick the gape worm. Therefore we see any condition of the ground that will bring the worm to the top, will endanger the chick if left to run on infected ground, for remember all earth worms do not have gape worms; only those where chicks have run that had the gapes.

My plan is first, one of prevention, and that is keep the chicks off infected ground. That can be done by putting them on ground where chicks have not been for the last three years, for I find if chicks are kept off a plot of ground badly infested for three years, there are but very few worms left. But after a few years all the ground near the buildings may become gapey, and you must either take them way out in the fields, or provide and clean runs for them on the infested ground.

If taken to the fields crows and hawks take so many, unless they are shot off, I think the best plan and one I have pursued, is to provide either brooder houses or pens without houses. I built six pens right on my worst ground. They were twelve feet square. In each I put one-half bushel of lime evenly over the ground. That is enough to thoroughly kill all grass and insects. In each pen I put fifty chicks with three hens or a brooder. I try to have them grow right on for eight weeks, when the pens can be opened and chicks will have free range to finish their growth.

I afterwards built open sheds, facing the southeast, and divided them into pens eight feet wide, putting in from forty to fifty chicks. The sheds face a field now planted to peach trees, and beyond them Alfalfa clover; but in the fall the chicks go out into the next beyond on each side. I like the sheds of course much the best, for the chicks are protected from the cold winds and above all the rains, and you are also protected while feeding and cleaning.

The chicks in the pens where they cannot get any worms never get gapes, while those put on the outside at the same time and fed the same feed, every one got them and while so small they were all worthless.

Where there are but few worms on the ground and they get them after started in growth, from five weeks to eight weeks old, I make a gape extractor of No. 30 or 33 wire. I like a looped wire above all other things, for if you twist it well while pushing it down, then give the chick time to throw out any blood and worms you fail to catch, yet cut loose, you need not strangle any, and you can cut the worms loose as surely as they are there, unless now and then one is away down near the lungs.

I never could accomplish anything worth talking about with lime dust or that class of cures.—W. W. KULP, in *Poultry Monthly*.

To Secure Better Attendance at A. P. A. Meetings.

Clearly, it is a mistake to hold annual meetings of the national association too far away from the center of population. But for the men who traveled the long distance, at heavy

expense, to do what they could at Charleston to help out the reforms called for in the affairs of the A. P. A., the meeting at Charleston would have been a dead letter, and a year would have been lost. It was a task for those men to go so far, and one they ought not to be called on to perform. By holding our meetings at far away points like Charleston and Cedar Rapids, we render it impracticable for enough members to attend to make the meetings truly representative.

Henceforth we believe it should be "common law" for the members of the executive committee to refuse to go further west than Chicago and St. Louis, further south than Ohio river points, further north than Toronto, and further east than Boston. This will be all the more desirable when the membership of the association is largely increased through the plans that now bid fair to be carried to a successful issue. The more members we have, the more anxious we should be to have as many of them as possible present at each annual meeting.—*Reliable Poultry Journal*.

BUILDING A POULTRY HOUSE.

Three of the Simplest Plans of Sections of Continuous Houses—Some Elementary Principles of Construction.



REQUESTS have recently been received from a number of readers of this paper for plans for poultry houses for flocks of various numbers from twenty or twenty-five to a thousand, the most urgent of these coming from one who wanted plans for a house for a hundred and twenty-five hens. I had intended to give a plan to definitely fit his request, but so many others are asking for plans that it seemed better to be more general. To give a plan for each is of course out of the question; first, for I have not the time, nor is there space in the paper for more than a fraction of them; second, because of the difficulty of getting at just what a correspondent wants, and the advantages and disadvantages of his location, those features of it which might call for variations from plans in general use.

The better way is to present systematically a number of plans, explaining the features of each and pointing out the relative advantages and disadvantages of each. Then with these plans before correspondents interested in poultry house construction, I can answer questions regarding them more satisfactorily. In this article three of the simplest plans are introduced. Each represents one section of a continuous house. The ground dimensions are the same in all, and they are drawn to the same scale, $\frac{1}{2}$ inch to the foot. In the next paper three plans of sections of the same dimensions as these with a walk in the rear will be given.

The floor dimensions of each section are 12 x 18 feet. In A, we have about the limit of simplicity in construction and furnishing, no droppings boards, the nest boxes easily movable and merely set upon the floor, faulging the wall and just far enough from it to give passage for the hens to the nests. A 1 shows the front of this section with doors and windows closed; A 2, an inside partition between two pens.

As seen in A 2, the plan provides for a house with sides—front and back, full 6 feet high, with double pitched roof, the peak of which is 10 feet from the ground. The doors are each 4 feet wide, and when open make the house virtually an open shed. The windows are placed as far as possible from the door, that when the doors are wide open and fastened back covering part of the window there may still be as much as possible of the window uncovered admitting additional light, and—when the sashes are out in summer, additional air. The object of placing them high up is to effect a slight saving in cost and labor of construction. When so placed they will slide between the plate and the scantling needed midway between plate and sill. Placed lower down there must be an extra scantling above each, and there is a little more cutting and fitting to be done. The amount thus

saved is inconsiderable in a single section, but when one is figuring close may be worth looking after. As to results in light and air, I don't think it makes any difference whether these windows are as indicated or a little lower down. They are small because the plan is for a house assumed to be used nearly always with the doors wide open.

Plan B provides for a warmer house with larger windows to fully light the interior when the doors are closed. To better distribute the light under such conditions these windows are placed close to the doors. When the doors are wide open and back against the side of the house the windows are completely covered up. If one wishes to do so short posts may be set in the ground about as at o o, and the doors when open fastened to these, thus giving some use of the windows at all times. I should not, however, consider this necessary, and I think it would be difficult to demonstrate any advantage in gaining a use of the windows in that way, while there may be a positive disadvantage in that if there is any possibility of dust, leaves, straw, etc., blowing about it will drift in and lodge behind and around those doors. Then, too, unless the door is very securely fastened in such position it is more or less racked by the wind, and unless much more substantially made than is necessary for its use is likely to become so warped and twisted that it will not shut closely.

The roosts in this plan instead of extending the full length of the section are in a space 10 ft. long and 5 ft. wide, practically a roosting box or compartment, boarded up at the ends and with curtain or shutter in front. In a house of the height indicated in B 1 and B 2, 7 ft. high in front and 4 ft. in rear, no droppings boards should be used. A board about 10 or 12 in. wide should separate the floor of this compartment from the main floor, thus keeping the litter in the floor out of it.

If one wishes to use droppings boards in a house of this plan he should build it 6 ft. high at sides, with double pitched roof as in A, this will admit of raising the droppings boards high enough from the floor to let considerable light underneath and give the fowls the use of quite the whole floor, as the boxing up in such case need not extend below the platform. This roosting plan is really better adapted to smaller pens requiring less roost room, for even in a house 6 ft. high at sides a platform 5 ft. wide shuts off too much light and air from the space underneath it. Even a platform wide enough for only two roosts over it shuts off too much, for such a platform should be at least 3 ft. wide, and is better $3\frac{1}{2}$ ft. wide. In a house of mine I would have neither enclosed roosting compartment nor droppings boards, but many like them.

The nests are indicated in this plan as placed along the rear wall. They may be either on the floor or at convenient height from it. An

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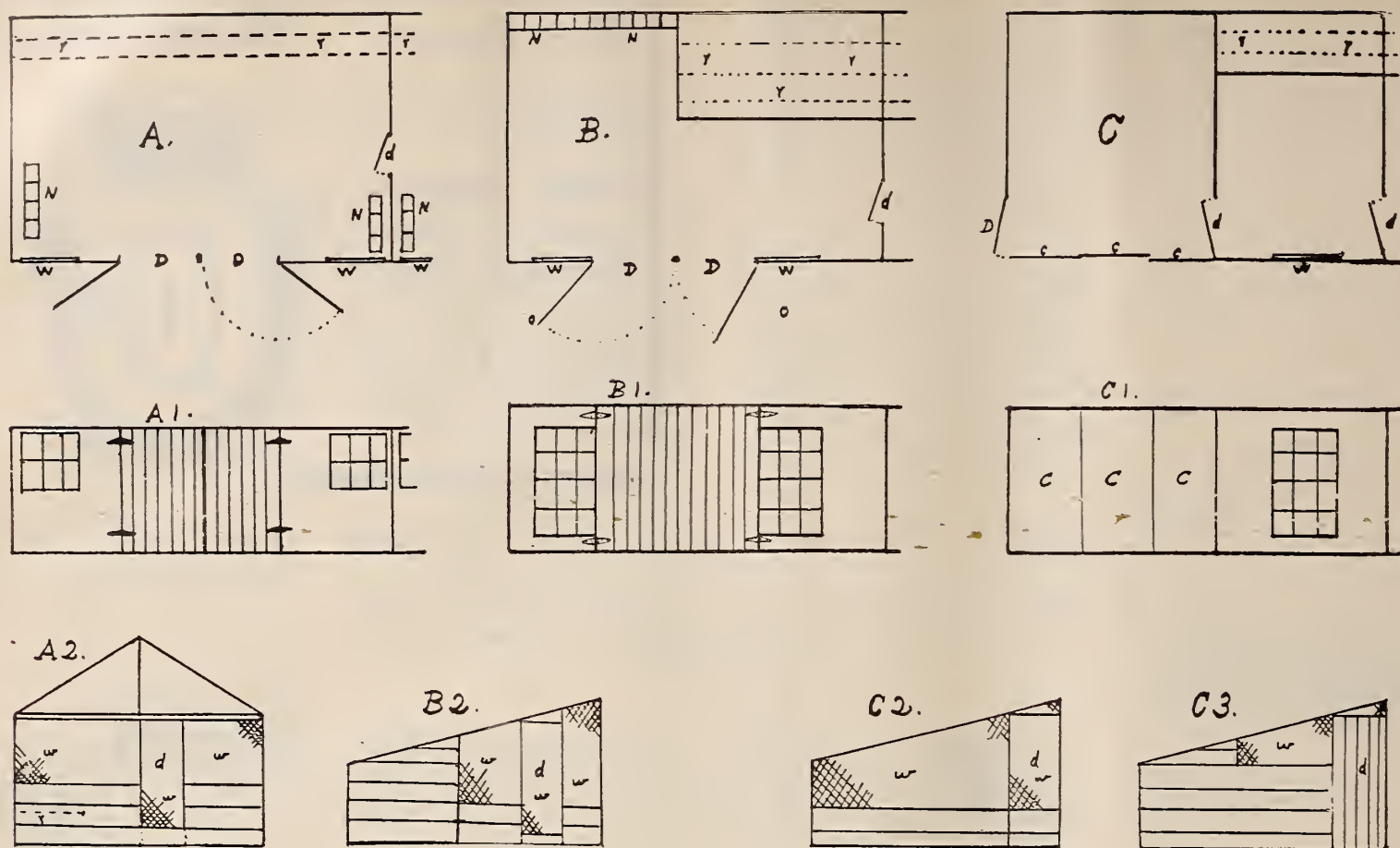
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PLANS OF THREE SECTIONS OF POULTRY HOUSES.

A, Floor plan of section of a "Scratching Room House." A1, Front of A. A2, Partition between two sections of A. B, Floor plan of section of house with enclosed roosting compartment. B1, Front of B. B2, Partition between two sections of B. C, Floor plan of section of open front scratching shed house. C1, Front of C. C2, Partition between two sections of C. C3, Partition between two sections of C. D D, Outside doors. d d, Inside doors. N N, Nests. W W, Windows. w w, Wire netting. r r, Roosts. c c, Muslin curtains. o o, Posts to which to hook doors when open.

error in the drawing shows too many nests for the space. It looks all right on the plan, but would give nests only 8 in. wide. There should be no more than eight nests in this space. In a house with only two compartments the nests might be on the opposite end walls, but for uniformity in a longer house the position indicated in the plan is preferable.

Plan C is a section of curtained front scratching shed house, in which there is a tight roosting compartment 8x10 ft., and a shed 10x10 ft. For full details of this plan the reader is referred to the issue of the paper for July 15, 1900. Any one interested in this plan can get a copy of the paper (if he has not one on file) from this office. With the full details thus available I think it not worth while to make any description of it further than to note the single difference in construction which this plan indicates. The plan in the July, 1900, paper provides for two curtains in front of the shed, these to be hinged at the top and hooked back to the roof when opened. This last plan provides for three curtains sliding in separate grooves, and so easily shifted to any desired position.

With two curtains on hinges the entire front is open, but the hooked up curtains accumulate large quantities of dust, and not many people would consider the arrangement convenient after they had worked with it for awhile. The three sliding curtains have been used in a number of houses, and those who have used them prefer that arrangement. The use of three rather than two curtains is to give a larger opening. With two sliding curtains the opening would at most be only as large as a curtain. With three curtains it is as large as two of them.

As to the relative merits of the plans, that depends on the poultry keeper and what he thinks. I very much prefer the first plan A, which is simplest, cheapest, and gives greatest capacity in proportion to entire floor dimensions. In it the hens have the use of practically the entire floor, except the little space occupied by nest boxes. I should rate capacity of B and C at 25 to 30 medium sized hens. I would not hesitate to put 40 such hens in A. There will be more to say on this point and some others contingent upon it, in the description of my own new house, the sections of which are similar, but a little smaller.

Before discussing questions of materials and

methods of construction, let me call attention to what is perhaps the greatest point of difference between plan A and plans B and C. The shed-form construction of B and C is that generally preferred by poultrymen as being cheaper and warmer. I prefer the other because it gives very much greater cubic air space at a comparatively slight increase of cost, because it makes a cooler house in summer, a better ventilated house at all seasons, and because it gives ample room overhead.

In the quotation from the writings of Mr. James Shackleton, some of whose utterances I have been called on to criticize in this paper, one of the good points which I regret he had not developed more reasonably, was giving the fowls abundance of fresh air. Such a house as plan A calls for will give all the fowls that can roost in it all the air they can use, and that without dangerous drafts. In the other style, the hot air banks up in the rear half of the house where the roosts are, the lower, flatter roof retarding the circulation far more than in house A. House A is comfortable to work in or pass through on a hot day. I have rarely seen a house of the other style that could be made even fairly so except by making openings in the rear wall.

Men too tall to work comfortably in house A don't grow. I am only about 5 feet 9 inches, yet I rarely get into a house of the B and C style where, when the floor is filled in, and the usual depth of litter on the floor, I can move about without either keeping close to the outer wall, or walking with a stoop, and keeping on the alert to guard against bumps on the head.

Now the difference in surface measurements by the two plans is much less than one would suppose from a careless comparison. The combined heights of the front and rear walls of A is 12 ft.; of either of the others, 11 ft. The combined widths of the two sides of the roof of A is 13 ft.; width of the roofs of the others, 13 ft. In all cases the widths given allow for a slight but sufficient projection of the roofs beyond the walls. Thus in A the measurement from the ground over the roof to the ground is 27 ft., and in the others it is 24 ft. The difference is only 12% of that measurement of B and C; the square contents of the end and partition walls in B and C are the same as the corresponding parts of A below the line of the eaves. The difference between them then is the content of the tri-

angular space enclosed by the roof, 24 sq. ft. in each wall; which is 33% of the measurement of a corresponding wall in B and C.

The cubic air space of a section of A is 1,728 ft., of a section of either of the others, 1,296 ft. The difference is 33% of the smaller number, the cubic capacities of the houses being to each other as their cross sections. The cost of the added space, however, comes almost wholly in the three feet additional of wall and roof, the increased cost of end and partition walls being slight. In giving plan of my house next month I will give actual cost of material for both plans.

In the plans as given, there is nothing to indicate the method of construction, except it be the position of the windows in A1. If a building is to be shingled or covered with paper, the boards of the sides should run lengthwise. This calls for sills, plates, and upright studs.

The dimensions of the stuff used for sills, and the sort of foundation, if any, upon which they are to be placed, must be determined largely by the location. In a tolerably dry and well drained location, the sills may be of 2 x 4 or 2 x 6 inch stuff, and rest on the ground. Stuff of same dimensions may be used if the building is set on posts or on a foundation of stone or brick. Heavier sills are sometimes used, but I do not think them necessary in these cheap houses. The lighter sill will generally last as long as you want it to, or need it. For studding plates and rafters 2 x 3 scantling will do, except for rafters of B and C, which are better 2 x 4. In the fronts, studs should be placed as necessary to bring windows and doors in required positions. At the back and ends they may be four or five feet apart. The rafters in plan A may be four feet apart, but in the others, with their larger single spans of roof, the distance between them should be less;—2 ft. is about right.

If the house is to be boarded up and down and battened, use 4x4 posts at the corners of the pens with a 2x6 sill, a 2x3 plate, and another 2x3 parallel to these and half way between them. This for the back. For an outside end wall put the intermediate strip at such distance from the sills as will about evenly divide an end of B or C in the middle, or an end of A in the middle of the mean, or average, height. The description of C in the July 15, 1900, paper makes everything plain in regard to the construction of a building to be

covered with paper. For full details of the other construction the reader will have to await the next paper.

Applying the Plans to a House for 125 Hens.

Now, to make the practical application of these plans to a particular case, as, for instance, that of the reader who wanted a house for 125 hens.

Four sections of A, or five of either of the others, would give him the room required. An experienced poultry keeper could handle the fowls in three sections of A, or four of B, or C, but I would never advise a novice to stock his houses to their fullest possible capacity. Crowding, like all other forms of forcing, has its limitations and its risks. So I would advise a novice to either build sections enough for the smallest numbers mentioned, or keep only such numbers in what sections he does build.

In B and C the sections come in pairs, rights and lefts, so to speak. If an odd number of sections of one of these is used, it is well to make the odd section just as it would be if one of a pair. Then if ever it is desired to extend the house no change is required in it.

If it is desired to keep the hens in smaller flocks smaller sections may be used. For those who may desire to adapt the size of the sections to other numbers of fowls the rule given some time ago is repeated:—

For hens of the medium sized breeds, in flocks of twelve or more, the allowance of floor space should be 5 to 6 sq. ft. per hen. For smaller flocks the space per hen should increase as the number of hens decreases. Practically as large a house is needed for eight or ten hens as for twelve.

Can You Guess His Name?

Only last winter, a notable writer on Barred Rocks, and a long time champion of the single mating theory, pointed to a pullet of mine saying, "I'd like to breed that pullet and get some good cockerels." Said pullet was too dark for exhibition, but very clear cut in bars, and will doubtless produce some good males. Now, is that breeder honest in his teaching? If he looks for good cockerels from pullets too dark for accepted color, is it single mating? —E. J. LADD, in *Oregon Poultry Journal*.

Breeding and Feeding of Turkeys.



EXHIBITORS of turkeys at the winter fair at Guelph were required to write an essay, giving particulars as to how their exhibits were fed and cared for. Three prizes were offered for the best essays, and were awarded as follows:—First, W. J. Bell, Angus; second, P. Scanlon, Ennottville; third, A. McDougall, Milton.

By W. J. Bell, Angus.

I keep only the Bronze variety. They are given free range at all times, except the old hen while brooding her young. During spring, summer, and fall they roost on fences near out buildings, and during the winter partly in an open shed facing east, and partly in an old log barn, single boarded on west, north, and east. About December 1st I have them pretty well "sized up," and know the ones I will retain for breeding purposes the next season. I select the best shaped, heaviest boned, and finest marked ones in the flock. In the male bird I have, with three exceptions, used one that has had three-fourths of the original blood with which I started fifteen years ago. My plan of introducing fresh blood is by means of a female, and this hen's female offspring is bred back to her sire. I then select males from this mating to head pens. I could never notice any difference in the flock from using young, yearling, or two year old toms, but have had best results from young hens. Large young pullets usually develop into heavy hens that lay soft shelled eggs, and also break their eggs while hatching.

One male to six females is about the average of my pens. I try to feed the male pretty well during the winter, but hens only lightly, as they are liable to get very fat coming on spring, and eggs would then be infertile in many cases. They can find about enough on range to do them. It is necessary in some cases to pare the spur and nails of male to prevent him tearing the hens.

About the first of April I place boxes and barrels where I want the hens to lay and sit, and by watching them until they lay two or three eggs, I can generally get them to sit in a good place near the buildings, sometimes in the buildings, and further, I know where each hen lays. Some turkey hens will be looking for a nest two weeks before she commences to lay. I take the eggs as laid, mark, and put in bran in a cool place, not forgetting to turn occasionally. I also place a Leghorn hen egg in nest in place of the turkey egg I take away, to entice the turkey back to the same nest. When hen wants to sit I see that nest is fixed so that young poults on hatching cannot escape. Place fine straw or hay in bottom, which is left rather flat in order to prevent the eggs pressing together in the center. It is then dusted thoroughly with Persian insect powder, the eggs the hen laid, about seventeen on an average, placed in same and left. If the nest is down near the ground I close up the hen at night to prevent dogs or other animals chasing her off; but if up from the ground a distance, I leave the hen entirely to herself, and let her hunt her own food and water. Every time I notice her off the nest during incubation I go and look if any eggs are broken; if so, the rest are washed off clean in lukewarm water, and fresh material put in nest. About the twenty-sixth day the hen is sitting I go quietly to the nest and dust insect powder over the hen's back and also around her. I think it wise not to spare the powder at this time, as the poults getting a start free from lice is one of the important points. However, I do not like to disturb the hen much in doing so. The twenty-ninth day I do not hesitate to gently run my hand under the turkey, and quickly lift her off the nest. I do this to ascertain how they are hatching, and sometimes it will save a poult's life by removing a hatched shell from over an unhatched one.

In case all are hatched, I mark each one, either by punching a hole in web of foot, or cutting off a toenail. If marked the first twenty-four hours after hatching they seldom bleed, and the mark shows better than if left till they become older. I let the hen go on again, and next day — if it is in May — I take

her and clutch to a large dry goods box on the south side of the house, put them all in, and place boards loosely over the top. In putting them in the box I pick the small scale off the point of the bill. In the box I place a saucer with some bread crumbs mixed damp with milk, stick some around the sides of the box, and also keep working some on my hand in among them. They do not learn to eat very quickly, but by going to the box five or six times this day I have them pretty well started by night. I feed once or twice in box the next morning, but if weather is warm about noon I change hen to an "A" shaped coop with lath front, and give the poults their freedom around coop. If weather is not warm, I leave in box an extra day, but never longer; and if hatch comes off in June, I take direct to the coop, excepting an unusually cold time. I keep this coop away from where the chickens (Leghorns) are, and have a dry place for the poults to dust, and also some fine gravel to pick over.

It is important that they get the latter as soon as placed in coop. Sometimes a cold spell will come on, and I put chaff under the coop, and throw a blanket over same until weather moderates. When two days from nest I gradually change food from bread to shorts, mixed with skim milk, and give both milk and water to drink, sometimes in separate utensils at the same time, and again alternately. It is necessary to give fresh drink in clean vessels at different times during the day. In mixing the shorts I sometimes get a grade that will not mix properly; I then add a very small quantity of bran or oatmeal to prevent this. Generally it is not needed if careful in not putting in too much. By watching the poults I can ascertain how they like it. Twice a day I cut up fine, with a pair of old scissors, a quantity of dandelions and onion tops with the shorts. They are very fond of this green food, and I think they are beneficial in keeping up appetite and helping to keep bowels in order. I feed them this way four times a day — always off my hands — for about five weeks, taking care to let nothing prevent me from moving every day the coop in which the old hen is confined. I have a scarecrow near the coops to keep hawks and crows away, but it does not keep all away.

I mix up fresh food at every meal, and give what the turkeys leave to my Leghorns. A great many raise young turkeys successfully by giving both hen and young their liberty from the start, and feeding little or nothing; but I have fields of grain running up to the yards, and am terribly bothered with hawks and crows, so that I am compelled to keep them near the house until five weeks old, when I give the hen her liberty, and only feed twice per day, — shorts in the morning and wheat at night. I give them all the skim milk and buttermilk they will take. Sometimes they get so much on range they will refuse the wheat, but they like the shorts in the morning. I have reasons, satisfactory at least to myself, for feeding shorts. It is well known that young turkeys have a tendency to looseness of the bowels, and I think this is equally well known that this is caused by indigestion in some form. Shorts are easily and quickly digested, therefore, I claim, helping to prevent this diarrhoea, but as they digest quickly, it is important that they be fed often. If I were using ground grain instead of shorts, I would not feed so often. However, above all, I would advise breeders to be very careful in making sudden changes from one kind of food to another. From the time the hen is given her liberty until about October 1st, very little attention is given, except to see that all are up at night, and if they have full crops. They roost on fences near the house.

From the beginning of October, I try to get them to eat large quantities of different grains — oats, peas, barley, or wheat. They are fond of the latter, and it makes a satisfactory food — price and results considered. An occasional feed of small apples after snow comes on is very much relished and good for their health. I have always sold all I raised for breeding purposes, therefore cannot give my mode of

VALLEY FARM, SIMSBURY, CT. WON
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dressing for market. I would never close up in a building to fatten, as they pine for freedom, and fail to put on flesh. I have known breeders to advise to put salt in the food of the young birds, but I have known cases where it was death to a whole flock. Sulphur I consider equally injurious. In preparing my turkeys for exhibition, I look carefully over for good points — the Standard of Perfection being the guide — wash off their legs and feet, and take as carefully as possible to the show. This is about all that can be done for turkeys in the way of preparing for exhibition.

By J. Scanlon, Ennottville.

We keep about four young hens and one tom for breeding purposes. By feeding liberally, the young hens will lay earlier, and usually more than old ones; by leaving barrels and boxes in corners or out of the way places, they will lay in them, and are not so apt to steal away to lay as old hens are. When a turkey hen wants to sit, get a shallow box, put some fresh earth in the bottom, then some chaff on the top, shape it like a nest, put it in some quiet place and move the turkey to it at night. If there are more eggs than she can cover put the rest with a chicken hen, when the young turkeys hatch give them all to the turkey hen. When she wants to leave the nest, get a box, take the bottom and one end off, nail lath on the end, leaving space for the young turkeys to go in and out, give the hen a good dusting with insect powder before putting her in the box. For the young ones, get white precipitate, one part; lard, ten parts; make an ointment of it, and apply it sparingly to the outside of the wings, at the base of the quills (a favorite resort for vermin); also use a little around the necks. We find this a very effective remedy. Move the box to a fresh place every morning.

For the first week we feed the young turkeys eggs and milk, with a pinch of salt added, boiled together until firm, then add bread crumbs made from low grade flour and bran. Do not wet it; the egg and milk will make it moist enough. We frequently mix in some finely chopped onion tops or similar green food, and over all dust a little black pepper. It acts as a tonic. This, with an occasional feed of finely chopped meat, constitutes their diet. Feed every two hours the first week. As soon as they get strong enough, let them out to roam about the fields, and feed once a day, and that in the evening, a little of the coarse bread, until they get big enough to eat.

As soon as they will eat wheat, we give them nothing else, and that only to coax them home. We find that by giving them their liberty they roam about the fields, picking up grubs and insects, and grow bigger and stronger than if confined. They are very little bothered from now until fall, when the fields are bare, and the natural food is scarce.

In order to fatten them for market, they need extra food. We do not believe in shutting turkeys up to fatten; give plenty of feed, and feed regular, and they will be on hand at the right time. The fattest and best turkeys we ever had were fed on turnips, boiled, and chopped barley mixed in when the turnips were boiling. They got all they could eat three times a day, and were given milk to

[Continued on page, 279].

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Poultry house plans will constitute a leading feature in the July 1st paper. Several plans for sectional houses with walks will be given and discussed. A complete description of the editor's new small house will also be given. This is a plain house of cheap construction, such as anyone who can saw off a board and drive a nail can build for himself. Readers interested in building are invited to ask questions or offer suggestions freely.

In a "Round About" paper something will be told further of the goose growers of Little Compton, and of the methods of hatching and growing chicks there.

Among features scheduled for early issues of the paper are an account of the turkey growing section in Rhode Island, and descriptions of several successful small poultry plants.

Good Growing Weather.

It is to be hoped that poultry keepers the country over are being favored with as good growing weather for chicks as we are having in New England this spring. It is a pleasure to handle the chicks, they are so hearty and grow so rapidly. There have been no standing still periods as there were last year.

We would like to suggest to poultry keepers who have been puzzled to account for poor results in egg production the past two winters, and for poor hatches and low vitality in chicks, that they observe and consider conditions carefully from now on; that if circumstances adverse to the regular and rapid development of chicks occur they endeavor as far as possible to overcome them, and keep the chicks progressing without check toward a well developed and timely maturity.

Those who are able to accomplish this will, we feel sure, get far more satisfactory results from both layers and breeders next winter and spring; and a comparison of effects and causes of this year with those of preceding years may lead toward definite conclusions as to the influences which produced unsatisfactory results in those years.



Of Interest to Shippers.

SHIPPERS of poultry and eggs frequently ask us for the names of "responsible" or "reliable" commission merchants in various cities. We are rarely able to give such information from a personal knowledge, and always feel some hesitancy about furnishing names when we know that some of those who make the requests will probably assume that our sending the name is in a sense a guaranty or indorsement of the individual or firm.

In the issues of the *New York Produce Review* for May 28th and June 4th, there was published information regarding the National League of Commission Merchants of the United States. A list of officers of the league, and of secretaries of its branch leagues, was given; also a statement of the objects of the league, and a list of its members. Cities having branch leagues are:—Baltimore, Md., Boston, Mass., Buffalo, N. Y., Chicago, Ill., Cincinnati, O., Cleveland, O., Columbus, O., Denver, Colo., Detroit, Mich., Indianapolis, Ind., Kansas City, Mo., Louisville, Ky., Memphis, Tenn., Milwaukee, Wis., Minneapolis, Minn., Mobile, Ala., New Orleans, La., New York, N. Y., Omaha, Neb., Philadelphia, Pa., Pittsburgh, Pa., Richmond, Va., St. Louis, Mo., and St. Paul, Minn.

This list covers all important receiving points for poultry and eggs. We would suggest that readers shipping or desiring to ship to any of these points, send for the copy of the *N. Y. Produce Review* of one of the dates mentioned. The publishers might send it free, but considering its value to the shipper, he ought to send five cents with his request for it. Address the publishers, the Urner-Barry Co., 173 and 175 Chambers St., New York city.

It is the purpose of the league to include in its membership only honest merchants. It investigates charges of fraud against members, and will, through its branch secretaries, report upon any merchant in a city in which there is a branch league.



Perhaps We are On the Upgrade.

WHEN a year ago last winter reports of poor laying came from all over the country, and numerous correspondents were asking: "Why don't my hens lay?" the writer freely admitted his inability to account for the failures in most of the cases presented. When spring came and poor hatches were the rule, he was again obliged to confess an unsatisfactory state of knowledge on the subject.

There was nothing particularly humiliating in such confessions, for that lack of knowledge on those two important points was general. Still it was an uncomfortable condition of affairs, and believing that nothing ever hap-

pens or fails to happen without sufficient cause or reason, we puzzled over it a great deal, and as opportunities occurred discussed the matters involved with practical poultrymen and breeders.

Then when last winter the egg yield was poorer than ever, and the growers of winter chickens began to report hatches poor, chicks weak, and the outlook in their business generally discouraging, talks with some of them began to put the matter before our mind in what we now more and more incline to believe is its true light. The impression grows upon us that the poor results of the last two years were due to a general departure from sound principles and wise methods of poultry culture, and were aggravated by unfavorable climatic conditions.

There are not wanting now evidences of a widespread return to what was best in the older methods of poultry keeping. The craze for excessive egg production has had its run, and may be said to have practically died out. For awhile there will be here and there sporadic attempts to work up enthusiasm for 200 egg hens, but those who engage in them will find the poultry public less gullible than it was a few years ago.

The absurd notion that a hen that had laid heavily all winter was still fit to do service in the breeding yard in the spring, shows less and less of vitality as the cumulative results of such an error are forced upon the breeder's attention. The inevitable reaction from the extreme intensive methods advocated by some of the most persuasive of the popular writers on poultry has begun, and the tendency of the times is unmistakably toward a return to more natural methods. Numerous other instances of reversion from extreme positions might be cited.

If now we are to have a season especially favorable to the best development of chicks, that added to other beneficial influences should result in a very marked general improvement. To the student of poultry affairs the conditions are most interesting. For ourselves, we are quite persuaded that the whole trend of motion in poultry development is decidedly upward.



Editorial Notes.

The elucidation of the subject of poultry fattening presents some points highly suggestive to poultry breeders. Several of these might have been developed in a reply to Mr. Moss' article in this issue, but we preferred to cut that controversy short and say no more than was necessary. Those points of value directly to feeders and breeders of market stock, and indirectly to all breeders, will be brought up later and discussed by several disinterested persons from slightly different points of view.

* * * * *

The goose is not the only grazer among our domestic poultry. Fowls—hens and chicks—eat great quantities of grass and other green stuff when they can get it. The difference seems to be that the fowl or chick can live and grow on the more concentrated grain diet, while the goose cannot thrive on a ration deficient in bulky green food.

* * * * *

Mr. W. R. Graham, in charge of the poultry at the Ontario Agricultural College, Guelph, Ont., spent some days early in June visiting New York and New England poultry plants. Mr. Graham impresses us as a young man of the type which will make the work of the experiment stations more interesting and more valuable to practical poultrymen, and better appreciated by them.

* * * * *

Canadian poultrymen, Mr. Graham tells us, are mostly as "afraid of corn as if it were poison." This is not as unfortunate for them as it would be if they were more of a corn producing country. There is not in Canada such difference in cost in favor of corn as in ordinary years obtains here.

* * * * *

Not long ago we reprinted from *Poultry and*

article entitled, "Who Are The Specialists," taking exceptions to some claims made by M. Louis Vander Sulck, editor of *Chasse et Pêche*, for the Belgians, as the specialists among poultrymen. In a recent issue of *Chasse et Pêche*, we notice a spicy reply to this article. We will try and have a translation of it for the next paper.

* * * *

The best bit of humorous poultry literature we have seen for a long time, is the article on Limestone Wheeler's method of feeding for eggs, by J. H. Davis, in the *Practical Poultryman and Poultry Star*. It is a clever combination of sense, wit, and nonsense which few poultrymen will fail to appreciate and enjoy. As it is quite brief, we will try and make a place for it in the next paper.

* * * * *

Will some of those esteemed contemporaries which so enthusiastically urge people to produce more poultry and eggs "to knock out the beef trust," please figure out for us the profits to the grower in poultry and eggs at prices that would make them cheaper than beef or pork, as they would have to be before they would make much of an impression on the prices of other meats?

* * * * *

Indications of quiet in South Africa, and of the approach of peace furnished by the revival of interest in poultry culture there proved correct. Peace has come. Now we hazard a prediction that the growth of interest in fine poultry there will be very rapid. We anticipate, too, that before long a South African poultry journal will be added to the list of our exchanges. We have now one from Australia, one from India, and one from New Zealand.

* * * * *

Cleveland, O., is being favorably considered as the place for the next meeting of the American Poultry Association. Cleveland will ask for it, and doubtless get it. A meeting there should draw a good and representative attendance.

* * * * *

"You may buy the horse with the eggs long before the chickens will pay for the saddle," is given as one of the proverbs of a wise old English "hen wife." It may have been so in her day and country, but there is no such difference in this country at the beginning of the twentieth century. While eggs furnish the most continuous income, and are the average poultryman's best reliance, the results of successful work with the chicks are neither slow nor inconsiderable.

* * * * *

For about a week the Hebrews of the east side of New York city maintained a boycott against poultry as well as other meat. Then the boycott was taken off poultry while continued on other meat, and as a result, poultry prices soared. Old fowls (heus) sold at wholesale at 15c. per lb., and cocks at 10c. The demand from the poultry hungry Jews was so keen that the retailers took unusual profits even after paying this high wholesale price, getting 20c. per pound, and sometimes more for fowls. The high prices attracted heavy shipments, but prices are still maintained at phenomenal standards, and those who buy meat are paying more for it than before. It must be apparent to everyone who observes the trust situation and agitation that there is more sentiment than sense in most of it.

As to a Late Season and Late Chicks.

In a letter accompanying his contribution on advertising, Mr. A. G. Duston says:—

"While many are predicting a late season of hatching on account of some that have poor hatches, I am not entirely of this opinion for the reason that the season is so early. Certainly the trees and flowers are at least three weeks in advance of our usual spring, and this, with the heat that will soon be with us, will cut off the hatching to a large extent. Of course those who are well favored with shade, and able to care for their chicks will still be able to hatch throughout the month of June, and get good results from these chicks.

"I have seen as handsome June chicks that came along and matured as well as those hatched in April, really maturing in much shorter space of time. In fact, the year I made my big winning at Boston, all the young

birds were hatched in June, and were shown in the January show well ripened off, completely rounded out, and unquestionably as handsome specimens as were ever shown. I know it was remarked at the last Boston poultry show, by one of the most prominent judges and breeders in the business, that he would give \$10 to see as handsome a pullet as I showed that year, and she was a June chick; so I am not one that is wholly discouraged if I am not able to get out my chicks in April or May."

MARKET REVIEW.

BOSTON.

Eggs—Nearby and Cape fancy 20@21c.; eastern, choice fresh 18@19c., fair to good 17@17½c.; Vt. and N. H. choice fresh 18@19c.; Mich. fancy 17½c.; Ind. and Ill. choice 17c.; western selected 17c., fair to good 15½@16½c., dirties 13@14½c.

Dressed Poultry—*Fresh killed, northern and eastern*,—fowls, extra choice 14@15c., common to good 12@13c.; chickens, choice roasting 25@28c.; broilers, 1 lb. each, per pair 50@75c., 2 lbs. each, per lb. 35@38c.; pigeons, choice \$1.50 per doz., common to good 75c.@\$1.25; squabs, choice large \$2.25@2.50 per doz. *Western, iced*,—turkeys, common to good 15c.; fowls, choice 12½c., common to good 11@12c.; old cocks 9½@10c.

Live Poultry.—Fowls 12½c.; roosters 8@10c.; broilers 1½ to 1½ lbs. each, 25c. per lb.

NEW YORK.

Eggs.—Prime state and Penna. 19c., average selected do. 17½@18½c.; best western 17@17½c.; ungraded western 16½c.; Kentucky 15@16c.; Tenn. and southern 13½@14½c.; checks 12@14c.

Dressed Poultry.—Fowls, choice 13@13½c.; old roosters 8½@9c.; Phila. and nearby broilers, choice large 36@40c., mixed weights 30@35c.; western broilers, choice dry picked 28@32c., scalded 26@30c.; nearby spring ducks 15@16c.; turkeys, prime hens 14@15c., do. toms 13@14c., average lots 12@13c., culls 8@10c.; tame squabs, white \$2.50 per dozen.

Live Poultry.—Fowls, 14c.; old roosters 10c.; turkeys 10@11c.; spring chickens, choice well grown 3½ to 4 lbs. to the pair 22@25c. per lb., small and inferior 18c.; average western ducks 70@80c. per pair; geese, average western \$1@1.12 per pair, do. southern and southwestern 50@75c.

PHILADELPHIA.

Eggs.—Penna. and nearby, returnable cases 17½c.; western, free cases 18c.; southwestern, do. 17½c., southern do. 16c.

Dressed Poultry.—*Fresh killed*,—fowls, choice western 13c.; do. southern and southwestern 12½c., fair to good 11@12c.; old roosters 8½@9c.; broilers, nearby 30@35c., western 25@30c. *Frozen*,—fowls 12@12½c.; roasting chickens 14@15c.; broilers, nearby 22@28c., western 16@19c.; turkeys 19@20c.

CHICAGO.

Eggs.—Fresh 14½@15½c.

Live Poultry.—Turkeys, young 12c.; fowls 11½c.; spring broilers \$3@57 per doz.; ducks 8@10c.; geese \$4@56 per dozen.

MARKET NOTES.

With warmer weather prices of eastern and western eggs in eastern markets begin to diverge more. But prices are pretty good everywhere this year.

Trade papers say that there is more complaint than usual of fishy flavor in ducks, especially Long Island ducks. It is thought that because of the high price of grain, growers trying to save on cost of production are continuing the feeding of fish too long, and not keeping the ducks on grain diet long enough before killing to wholly eliminate the fishy flavor.

Italian egg producers are in trouble. Germany has increased its tariff imports on eggs, and Germany was a good customer. It is suggested from some quarters that the Italians will now send their surplus to England; in this following the example of the Canadians when their product was shut out of the United States. There seems to be no doubt

in these quarters of England's capacity to absorb all the egg surpluses—at a price.

It is said that less eggs than usual are going into cold storage, the price of eggs suitable for storage being so high that few speculators care to take the risks. This will be another factor contributing to high prices for strictly fresh eggs this season. It will pay the eastern poultryman, especially, to give his hens the best of care during the summer. By doing so some will surely make up what was lost by the failure to get winter eggs.

Current receipts of poultry at Boston are much greater than last year—this apart from the very heavy consignments which are received here for export.

Ten carloads of frozen chickens and turkeys were recently sent from So. Omaha, Nebr., to Alaska via Tacoma, Wash.

A car of live poultry was shipped not long ago from Eldorado, Kansas, to San Francisco, for export to Manila, said to be for the American soldiers in the Philippines.

Keeping Poultry Manure.

Editor FARM-POULTRY:—Seeing a discussion in your paper in regard to the proper method of preserving poultry manure, I will describe a plan which I have adopted with a promise of satisfactory results.

I got some wire screen with quarter inch mesh, such as is used largely for cellar windows, and made a sieve, and used it to sift the sawdust and other fine stuff where the woodpile was worked up, not being able to get much sawdust in any other way. This fine material I use on the board under the roost, no matter how deep. When the accumulation suggests a cleaning I sift the whole in the same sieve, and all the dry material needed adheres to the droppings, which is stored in boxes or barrels in any convenient place.

I have not used this plan long enough to know how it will be next spring, but have strong hopes of it. I have tried plaster and coal ashes, and got just such a pasty mass as Mr. Gröte describes, and to bring that to usable condition I dumped it on the ground and dug it over with a steel rake, working in more soil at each raking till it was fine enough to distribute in the drills for planting.

I do my sifting over the board, so the dry sawdust is left where it is wanted.

Manchester, N. H. O. H. LEAVITT.

A Veteran Gander.

It is said that William Brigham, of Chardon, Ohio, is the owner of a gander goose more than one hundred years old, and that he is as lively today as the large flock of youngsters which he so proudly leads about Mr. Brigham's farmyard. The bird was brought to this country by Mr. Brigham's father nearly a century ago from the east, and has been in the family's possession ever since. There are many accounts of the old fellow's sagacity in eluding foxes and other enemies, and he was the playfellow of many of the old men of the township when they were boys, years ago. The goose was exhibited at the recent Gage centennial celebration at Burton, where he attracted a great deal of attention.—*Farm, Garden and Poultry*.

ANSWERS TO QUESTIONS.

THE OBJECT OF THIS DEPARTMENT IS TO HELP READERS OF THE PAPER IN EMERGENCIES. It is a short order bureau of information.

Correspondents who ask for information or advice in matters requiring prompt attention, will be answered in the earliest possible issue of the paper made up after their inquiries are received. If inquiries will keep in mind that THE FORMS FOR AN ISSUE BEARING DATE OF THE 1ST DAY OF A MONTH CLOSE ON THE 20TH OF THE PRECEDING MONTH, and THE FORMS FOR AN ISSUE BEARING DATE OF THE 15TH DAY OF A MONTH CLOSE ON THE 5TH DAY OF THAT MONTH, they may know just how soon replies to questions can reach them through the paper. Inquirers are requested also to keep in mind that while an important feature of the paper, this department can only be given its due proportion of attention, and when inquiries requiring special investigation before a reply can be made are received, some time may elapse before the matter can be given attention.

IN CASES OF SPECIAL URGENCY THOSE WHO ENCLOSE STAMP FOR REPLY WILL BE ANSWERED AS PROMPTLY AS POSSIBLE BY MAIL.

Correspondents whose questions do not come within the scope of this department as outlined above will be referred to the most recent available information in line with their inquiries.

BE SURE TO SIGN YOUR LETTER. WRITE YOUR NAME AND FULL ADDRESS VERY PLAINLY.

Are Buff Wyandottes Better Layers Than White? (E. F.)—I know of no reason for supposing that there is on the whole any difference in the laying qualities of the two varieties.

Sealy Leg. (W. W. A.)—"I have some Partridge Cochins which have large scales that appear to me as if they were about to fall off, all over their legs. What is the cause of it? It cannot be dirty quarters, for they are cleaned out once a week, and sometimes twice."—The "sealy leg" is caused by a mite which attacks the legs and feet of fowls. When introduced into a yard it may get a strong hold there, even though the place is clean, if no measures are taken to destroy it. I don't know that feather-legged fowls are more troubled with it than others, but they certainly are a little more difficult to treat for it. For remedy, see reply to J. W. A., page 228, of May 1 number.

White Wyandottes With Single Combs and Green Legs. (E. F.)—"I have 31 White Wyandotte chicks of which 7 have single combs and 3 have green legs. Do White Wyandottes throw such stock, or have I been stuck? Are they pure blood when they come that way, or are they the result of a cross somewhere in the makeup? Will the rose combed and yellow legged chicks that I have be all right to save for breeding, or will they throw single combs, too?"—There is probably no stock of White Wyandottes which does not give some single combed and some green legged offspring, but 7 single combs in 31 chicks is an unduly large proportion, indicating that selection was not as close as it might have been. The proportion of off colored legs is not so excessive, and some of them may improve to a passable color as the chicks mature. If the rose combed and yellow legged birds are good Wyandottes, and in appearance desirable breeders, I would certainly advise Mr. F. to use them. They may and probably will throw some chicks that are not right, but with proper care in selection the number of these may be reduced each year, until the bird that is off in such respects is quite a rarity.

Protrusion of Bowel in Cock Bird. (J. M. T.)—"A fine cock bird of mine was apparently in good health. Was fed upon mash and wheat. I put him in a yard by himself. In a few days he commenced scouring, and in spite of all treatment, he had what seemed to be a bad case of piles, the rectum protruding about an inch, and the discharge running way down to the keel bone, and making the skin red and inflamed.

I gave him treatment; washed him with antiseptic, and got the rectum back in place,

and for three or four days he seemed to be cured. Then, one morning I found him just as bad as ever. His appetite was good, but he was feverish. I had to use the hatchet. I could not do him any good. He seemed incurable. I could find nothing on the subject in any of the books and magazines I have. I know of no reason for such trouble, except that I fed him whole corn instead of wheat and mash—if that is a reason. He had cauter which I doctored and cured with three per cent solution of pyrozone. He bled from the rectum drop by drop all the time the rectum was protruding. Please advise treatment for such condition. What was the matter with him?"—I can go no further in the case than Mr. T. did, never having seen a case of protrusion of the bowel in a male bird, and finding no reference to such a case in any of the indexed books and papers at hand. I doubt whether a qualified medical expert would care to offer an opinion on such a case without direct examination. It is quite improbable that the description of the bird as presenting no other symptoms of the trouble is correct, for the number of poultry keepers who note symptoms in the early stages of such troubles is small. The greater number at every stage of disease see only the conspicuous symptoms.

White Comb. (F. R. L.)—"Could you suggest a remedy for the following trouble which has attacked some of my flock? A white sealy substance appears on the comb and spreads slowly to face and skull, and in severe cases feathers on the head come off. Hens affected are in good health and lay well, and don't seem to mind it as much as I do. It was introduced into the flock by a cockerel purchased some time ago, which had it upon arrival. The breeder from whom I bought the cockerel said to use nitrate of silver and vaselline for it, but this removes it only for the time being."—This disease, white comb, or favus, is caused by a parasite fungus. The bird having the disease ought never to have been allowed to associate with the rest of the flock until thoroughly cured. On treatment of this disease, Salmon, in "Diseases of Poultry," says:—"It is important that the remedy should penetrate beneath the crusts to the skin, and to secure this the crusts may be rubbed off as thoroughly as possible with a blunt instrument such as the handle of a spoon. This should be done gently so as not to cause bleeding. After the crusts are removed dress the affected part once a day with any one of the following preparations: Tincture of iodine. Benzine, 1 part, soft soap, 20 parts; mix thoroughly before using. Or carbolic acid 1 part, soft soap 20 parts, to be well mixed. The carbolic preparation



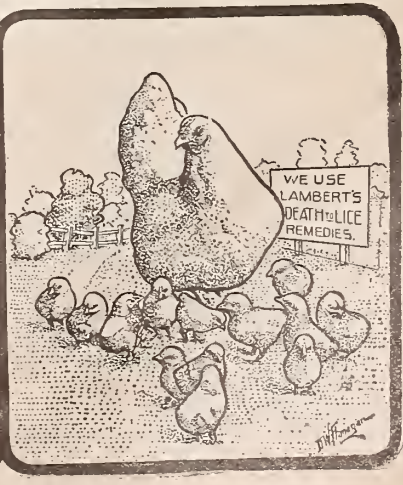
A Good Hatch

Of strong healthy chickens is not the result of luck or chance. The best hatches are secured by those who use

Lambert's Death to Lice

On their breeders to preserve their health and vigor, and on their sitters to keep them clean and comfortable. It injures nothing but vermin. Trial size, enough for 10 applications, 10c. postpaid. A 48oz. 50c.; a 100oz. \$1 from here or nearest agency by express. Book Free.

D. J. LAMBERT,
Box 800, Apponaug, R. I.



should not be applied to a large surface at one time as the acid may be absorbed and cause poisoning. A good ointment may be made with either calomel or red oxide of mercury 1 part to 8 parts vaseline. If the above mentioned remedies fail, a more active but also more dangerous ointment may be made by mixing 3 grains of nitrate of silver with 3 oz. of vaseline. This ointment should be made by the druggist and carefully rubbed upon the diseased surface. Another remedy, which on account of its poisonous character should only be used as a last resort, is made by dissolving 10 grains of corrosive sublimate in an ounce of water.

"In the remedies here mentioned the means are provided for effectually arresting this troublesome malady and eradicating it from the poultry yard. If taken in time, the application of the milder preparations daily for a few days will be sufficient; but in case a number of birds become affected, and particularly if feathered parts are involved, the more active agents will be required. It is also necessary to adopt sanitary regulations. The affected birds should be separated from the well ones, and the houses and runs should be disinfected with lime wash and carbolic acid solution."

Mr. L.'s failure to make a permanent cure with one of the strong remedies would seem to be due to failure to remove scales and secure effective application, or to failure to disinfect premises. Perhaps both of these things operated to prevent a complete cure.

Preserving Eggs for Winter. (M. L. W.)—The article on this in the March 1 and 15, 1902, paper, reprinted from the Rhode Island Experiment Station report, will give you the information you want.

The Monarch Incubator. (H. W. N.)—The Monarch incubator is no longer advertised, but if I am not mistaken, Mr. Rankin still manufactures them. It is too high priced a machine to sell freely in general competition, and for that reason he, several years ago, quit advertising it, and greatly reduced the output. It is not as easily handled by an inexperienced operator as the now popular machines, but in the hands of experts its work has not been surpassed by any of the later machines. You could get definite information as to its present manufacture by addressing James Rankin, So. Easton, Mass.

Would Dr. Santee's Plan Apply to a Brooder House? (T. H. C.)—"I was very much interested in the description of Dr. Santee's new poultry house. We are expecting to build a new brooder house within a few months, and have been wondering how far, if at all, the doctor's style of laying house could be carried out in a brooding house. The house is to be 16x100 ft. Will you give me your opinion in the matter? Do you think it an advantage to oil the muslin when used in place of glass?"—"A cold" house plan is not adaptable to a brooder house for chicks, because for them while small the heat must be maintained at a certain temperature. Even with a well constructed brooder house—built for warmth—it is not always easy to maintain the required temperature. An open shed might be used as a shelter for an outdoor brooder. That, I judge, is about as far as one could go in applying Dr. Santee's plan of a laying house to a brooder house. Wherever muslin curtains are used, exposed to the weather, they should be oiled, and the oiling repeated as often as necessary to preserve the fabric. I wouldn't be bothered with them myself. I would have glass where light is needed, and elsewhere boards.

Broilers in Dwelling House. (H. W. N.)—"In looking over June 1st F.-P., I notice a short article, 'Raising Broilers in Old Dwelling House,' and I note it has the initials H. M. N. Now I suppose this is my query, although my initials are H. W. N. Will you please state how much sand I would need to use on the floor in order to be safe. Also what should a squab broiler weigh? In a room as described in the article referred to, with two Peep-o'-Day brooders running, would it be necessary to have heat from stove or other source in addition? The room is plastered. If I began early in December to set eggs, my chicks would be hatched probably by Dec. 1st. Then allowing two months for growth, that would make them of a marketable age February 1st. But I note you say begin in November, and sell in March. How is that?"—I owe Mr. N. an apology for

having overlooked his question as to sand, also for the error in his initials due to a compositor's erroneous interpretation of a character in the copy which I intended to represent a W. The occurrence or absence of leg weakness would not depend solely upon the use of sand in proper quantity. I think it uncertain whether as a matter of fact running on the board floor would in itself be at all detrimental to chicks designed for table use at an early age. The principal advantage of the use of sand is that it acts as an absorbent for the liquids of the droppings, and that the chicks can exercise in it. For such purposes about an inch of sand on the floor would be sufficient. To further promote healthy exercise, an inch or two of coarsely chopped straw or hay or of chaff should be spread over the sand. Unless a very cold snap should occur, there would probably be no need of heat additional to that of the brooders. In case more heat were needed, it could be furnished by a small oil stove or a large lamp. A "squab" broiler weighs three-quarters of a pound to a pound, but sometimes when demand for them is urgent, both smaller and larger birds pass. If Mr. N. will read again what I said in reply to his question in the last number, he will see that I do not say to "begin in November and sell in March," and that what I do say applies to the sale of the chicks at about eight weeks of age.

More About the Egg Situation.

Notwithstanding the general report of a lighter egg production this spring as compared with last year, the receipts at New York have been fully as large during March and April as they were during the same months in 1901. In fact we have run a little ahead this year; the March and April receipts amounting to 756,041 cases, as compared with 752,965 cases same time last year; and this gives us the largest receipts for these months ever recorded in this market.

But in considering these figures it must be remembered that the port of New York has had a large increase in storage facilities during the past year, and that larger quantities of eggs have been drawn here for permanent holding. The receipts, as reported, have included car lots delivered at the big Jersey City warehouses which have absorbed many thousands of cases. The capacity of the new Merchants' Refrigerating Co., of Jersey City alone is about 750,000 cases, if all was used for egg storage, and the perfection of the facilities offered by this company has drawn a great many eggs this way which might have gone elsewhere. Reports from other storage centers indicate less eggs stored during April than was the case last year, notwithstanding the extreme prices ruling, and considering New York city alone the same rule would doubtless hold good; but the Jersey City accumulations (which are really a part of our available stock) when added to the holdings of the New York houses, would make a total in excess of the quantity held here last year.

We learn that the three principal houses in Chicago had about 275,000 cases accumulated by May 1st, and that this would show a reduction compared with last year of about 25%. It is to be noted that Boston holdings were about 23% less than last year on May 1st, and so far as we have heard estimates of the accumulations in other important places, they range from 20 to 25% less than a year ago.

But it is to be noted that the percentage of decrease from last year appears to be decreasing as the season advances, and there are conditions of supply and demand now developing which would indicate the probability of a larger May storage than occurred last year. The distributing markets are becoming snarled with medium grade eggs, and it now looks as if prices for these will have to rule low enough to induce storage of a considerable quantity of them. In fact there is every probability that we shall go into the mid-summer period with about as large an accumulation of cold stored eggs as we had a year ago, and their cost will be anywhere from two to three cents per dozen higher.—N. Y. Produce Review.

A Good Carriage Offer.



THE modern way of doing business by selling direct from the factory to the consumer has evidently come to stay. Its economy is so great that no one who has once discovered how much can be saved by such direct dealing would be willing to go back to the old fashioned way of buying, in which profits must be paid to two or more

ELM POULTRY YARDS, HARTFORD, CONN., 15th Year,

OFFERS GREAT BARGAINS IN BREEDING STOCK,

OF

S. C. White Leghorns, S. C. Black Minorcas, Barred and White Plymouth Rocks, White Wyandottes, and Light Brahmas.

3,000 Chicks Now Growing for Fall Trade.

ELM POULTRY YARDS, Box R, Hartford, Conn.

middlemen. But the new business method more than ever requires confidence in the fairness and strict honesty of the business firm and a reputation above any suspicion of unfair dealing.

The success of a firm having this kind of a reputation is illustrated in the career of The Columbus Carriage and Harness Company, of Columbus, O., which has sold an immense number of high grade carriages and harness by a plan of shipment direct from the factory, insuring every buyer against loss or dissatisfaction. By their plan a carriage user in Maine or Texas can buy far cheaper than at the local store, and with equal opportunity to return any article that is not satisfactory. To aid buyers at a distance this firm has prepared a large catalogue which shows by accurate illustrations and careful description exactly how and of what material each vehicle is constructed. This catalogue is a valuable guide to buyers of carriage and harness, and even those who may intend buying elsewhere should have a copy on hand to consult in order to be informed what the fair factory price is before the profits of jobbers and retailers are added on. Anyone can obtain this catalogue free by writing to The Columbus Carriage and Harness Company, Columbus, Ohio.

BREEDERS AND MARKETMEN.

OUR REQUESTS:—We make two requests of our Subscribers. One is when writing our Advertising patrons always mention **FARM-POULTRY**. Another is if you ask them questions, always inclose a stamp. If you observe both of these requests it will benefit you amazingly. It shows that you mean business. Remember, "Molasses will catch more flies than vinegar," and those who observe it are served first.

A BLUE BARRED cockerel pullet breeder, 8 lbs., grand shape, fair comb, light bay eyes, clear yellow legs and beak, surface color clear and even, no brass, under barring fine, \$5. Watch this column for other descriptions. Money refunded if birds are not as represented. Write for other information and all Barred Rock wants. G. E. Fassett, Beverly, Mass.

BARNES & WOODBURY White Wyandottes, winners of 1st pen, 3d cock, 3d hen, 3d pullet, 2 specials at Boston's largest show, 1902. At Beverly, Mass., 1902, 4 regulars, 11 specials. Breeding stock for sale. Eggs, \$5 per sitting. Weuhani, Mass.

BARRED PLYMOUTH Rocks and White Wyandottes. Over fifty prizes to our record the past six years at New York, Orange, and Washington. Eggs rest of season at one-fifth value, from absolutely stay White Wyandottes and clear narrow Barred Rocks, \$1 per 13. Pedigreed Colbie pups from imported stock, \$5 each. Wm. H. Cyphers, Box 551, Washington, N. J.

BUFF WYANDOTTES, buff to the skin, great layers. At Beverly we had 1st cock, 3d cockerel, 4th, 5th hen. Eggs \$3 per 13; \$5 per 25. Stock in fall. Chas. Robinson, Marlborough, Mass.

BUFF Wyandottes. Now is the time to buy breeding stock cheap, as it must be sold to make room. Some Boston winners in the lot. G. A. Knight, Peabody, Mass.

ROSE COMB Brown and S. C. Black Leghorns. Circular free. J. L. Randolph, Cutler, O.

SILVER Wyandottes, large, open faced, typical, practical. Every bird a winner the last five years. Won 3 firsts at Boston, 1901. If you want this kind, write John C. Jodrey, Box 4, Dauvers, Mass. P. H. Gossard, Mo. Valley, Ia.

TRASK'S Plymouth Rock Farm, Barred, White and Buff P. Rocks. Bargains in brooders. Circular free. E. F. Trask, Beverly, Mass.

WHITE and Buff Wyandottes; 100 yearling hens for sale, also my 24 White Wyandotte cock and 3d Buff Wyandotte cock at Boston, 1902, and the females that were mated with them this season. The White females are exceptionally fine ones, large and well built, and very white birds, and will score 94 to 95-1-2. Write for particulars and prices if you wish to secure some of the best birds on the market. No time to devote to the poultry business, as it ought to be, the reason for selling. F. W. Howes, 14 Main St., Amesbury, Mass.

WHITE WYANDOTTES, Triumph strain, 100 large vigorous cockerels, 150 pullets, all bred from extra large dark brown eggs. Also a fine lot of fancy stock, dead white and all right for any show. Prices right. Write at once, W. E. Mack, W. Woodstock, Vt.

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BANTAMS.

GOLDEN and Silver Sebright; Buff and White Cuckoo Bantams. W. W. Clough, Medway, Mass.

COCHINS.

PARTRIDGE Cochins. Stock. Eggs 15 for \$1. Pequot Poultry Farm, Mysie, Conn.

DUCKS.

MAMMOTH deep keeled first prize Pekins, second to none. Eggs, \$1.50 per doz; \$5 per 100. Book orders early. H. G. Worth, Nantucket, Mass.

IMPERIAL Pekin duck eggs for hatching. Sittling of 11 eggs, \$1; lots of 50 or 100, 6c each. W. H. Hathaway, Ashlawn, Assonet, Mass.

EGGS.

EGGS for hatching, fertile and from high class stock. Single and Rose Comb R. I. Reds; S. C. White Leghorns; White, Buff and Barred Rocks; Buff, White and Golden Wyandottes, Light Brahmas, Sherwoods, at \$1 per sitting of 13 eggs. Stock for sale. W. H. Hathaway, Ashlawn, Assonet, Mass.

INCUBATOR eggs, Hawkins' Barred Rocks, half price, \$2.50 per 100. E. Gimlin, Rosemond, Ill.

EGG PRESERVER.

SAVE your eggs for higher prices, by using our new and improved preserving powders, a true and tested preparation for keeping eggs fresh any length of time. Eggs have been kept by it for two years. Powder No. 1, for 5 doz, 10c; No. 2, for 10 doz, 15c; No. 3, for 20 doz, 25c. Larger quantities at reduced prices. C. G. Kelley & Co., 55 Eastern Ave., Gloucester, Mass.

INCUBATORS AND BROODERS.

IF YOU USE an incubator send me your address and I will tell you why chickens die in the shell. G. J. Greene, Washingtonville, N. Y.

FOR SALE, 120 Cyphers, \$10. Mann bone cutter, No. 1, \$6. 3 Champion brooders, \$10. Wilson bone mill, \$5. 3 Cyphers brooder stoves, \$2.50. All in good order. J. W. Boyard, No. 3, Pottstown, Pa.

LEGHORNS.

S. C. BUFF and White Leghorns, Arnold and Willcox strains. My stock is as fine as can be produced. Pons headed by prize winners. Eggs \$1 per 13; \$2 per 30; \$5 per 100.

BUFF, White Leghorns. Eggs 75c per 15; \$1.25 per 30; \$2 per 60; \$3 per 100. Circular free. John A. Roth, Milford Square, Pa.

S. C. WHITE Leghorns exclusively, 175 hens for sale. Right quality, right price, write now. R. B. Pusey, Princess Anne, Md.

ROSE Comb Br. Leghorns from Kulp's 242 egg strain direct. Also S. C. Browns and Barred Rocks. Eggs \$1 per sitting. Stock, all kinds, in Sent. Fred B. Rodman, 142 Shepard St., Lynn, Mass.

MINORCAS.

BARGAINS in Northup's Min. and eggs remainder season. Geo. H. Northup, Raceville, N. Y.

PHEASANTS.

ENGLISH Ring Neck pheasant eggs, \$9 per cent guaranteed fertile; imported stock, \$3 a sitting; \$10 for 50. E. F. Conness, Mattapan, Mass.

PLYMOUTH ROCKS.

WHITE Ply. Rock stock and eggs for sale at all times. E. T. Murphy, E. Whitman, Mass.

WHITE P. Rocks, winners at Peterboro, N. H., 1902, twelve premiums from ten entries, great layers. Eggs \$1 per 13; \$5 per 100. Stock for sale, few choice males, low. W. M. Davis, Hancock, N. H.

RHODE ISLAND REDS.

R. I. REDS. Eggs and stock from best of stock. E. A. Hall, 60 High St., North Attleboro, Mass.

RHODE Island Red eggs now half price. Frank Metcalf, Red Feather Farm, Warren, O.

STOVE WICKS.

THE SUNLIGHT CARBON WICK lasts 20 times longer than ordinary wicks. Sample 10c. Best on earth; clear white light. S. G. Robinson, printer of F.-P., 255 Atlantic Avenue, Boston, Mass.

TRAP NESTS.

THE IDEAL, shows the hen that laid the egg. Reliable, convenient, compact, simple, economical. Trap device sent by mail prepaid. Circulars and testimonials that will interest you are free. Write Frank O. Welles, Yarmouth, Maine.

TURKEYS.

TURKEY CULTURE, just out, giving the experience of the most successful turkey raisers in the United States. Every turkey breeder should have one. Price 50c. Excelsior Wire & Poultry Supply Co., 26 and 28 Vesey St., New York City, N. Y.

WANTED.

WANTED, situation on large pond, farm as help English, single, 25 years, exp. in all branches. E. S. Whalley, Portland Farms, Highlands, N. J.

YOUNG man desires position on poultry farm. Best of recommendations. Chas. A. Cavanagh, 402 West 48th St., New York City, N. Y.

WYANDOTTES.

5000 FERTILE eggs for sale this season at \$4 per 100; \$20 per 500. Will hatch lots of strong chickens. Stock all have free range and are large, blocky, fine shape, birds that are pure white, rich yellow legs, and are great layers of large eggs. All eggs well packed for safe shipping. Order at once. Stock for sale. C. A. Stevens & Co., Wilson, N. Y.

WHITE Wyandottes. For the balance of season, eggs from the very pens I bred from, \$1 per 13. P. D. White, No. Attleboro, Mass.

FOR SALE, at great reduction, one hen extra large solid Buff Wyandotte pullet and cockerel \$12. William O. Howland, Cambridgeport, Mass.

WHITE Wyandottes, 210 egg and Duston strain, standard and miltity combined; eggs \$1 per 15. This year's breeders for sale. Wellsboro Poultry Yards, Wellsboro, Pa.

YOUR FORTUNE told by the STARS, with photo of person you should know, for stars and astrology. PROF. ASTOR, Box 5693, Philadelphia.

Breeding and Feeding of Turkeys.

(Continued from page 275.)

drink. This gives the flesh a nice white color. A little Pratts food in the mash once a day keeps the birds in good health. If any should get cholera, give them a strong solution of hyposulphate of soda,—a teaspoonful of soda to a quart of drinking water, and feed very little for a day or two. For blackheads, give five or six drops of castor oil, and two or three whole black peppers to each bird, a little cayenne pepper in the soft food is a preventive of this disease. Turkeys should be fed heavily for a short time, then dressed and sent to market.

In conclusion I would say, get your turkeys to lay at home, and save trouble looking for nests. Feed damp, not sloppy, feed to the little ones. Let the old hen have liberty to roam; she knows best what is wanted. Keep them away from other poultry as much as possible. As soon as they start to loaf around the building look out for trouble.

By A. McDougall, Milton.

My experience in raising turkeys has been a very successful one, extending over quite a number of years. I breed from only fine healthy stock, saving my best for that purpose, and do not breed from the same stock long. Turkeys differ from other classes of poultry in many ways. The domestic turkey is but few removed from its wild ancestors, and much of that wildness still remains. They cannot be confined profitably, and the larger the flock the greater the disposition to roam. I change my gobbler every year, or sometimes keep him a second year if the offspring are healthy and good, and select hens from my own stock, as they are less inclined to wander away than strangers.

New blood I consider a great point which the average farmer neglects, getting birds too near at home, which are often inbred, and that is the cause of a great many deformities. I usually import a gobbler, and to doing so aim to choose one that is robust, a vigorous grower, and of strong constitution. If more care were used in the matter of selection, it would be a small job to overcome the worst diseases. Roup, cholera, and other diseases are much more easily prevented by proper selection of breeders than by any other means, and I know that if one can get breeding stock that has been free from them for a few generations, it is an easy matter to raise turkeys.

As soon as I notice my turkey hens manifesting intentions of beginning to lay, I prepare nests for them in out of the way places about the premises. Placing the nesting material in an old barrel, and piling heaps of brush fodder or other litter around and upon it, and usually the hen is obliging enough to lay in it. If several of the hens begin to lay at the same time, I set the first one that becomes broody, and at the same time set two chicken hens on turkey eggs, giving all the poults when hatched to the natural mother, as she alone understands their needs, and can care for and protect them properly.

When the poults are twenty-four hours old, I thoroughly dust them and their mother with a good lice killer, and take them to the most solitary places about the orchard, where I have a pen built of twelve inch wide boards, and that is their home till they can fly over the twelve inch boards, when they are given their liberty.

While they are penned, I feed them custard (made of sweet milk and eggs alone) three times a day, giving the mother a handful of grain. This custard is both food and drink for the young poults, and I have never known one so fed to be sick at all. Lice must be watched for, of course, and the dusting repeated every week or so, even after they are half grown.

After they are three months old, they may be given cracked wheat, corn, and such like, but no whole grain until they are five or six weeks old, and then to finish them up for market, I feed pea, corn, and barley meal, scald and feed all they will eat while it is warm. Do not leave anything before them for any length of time, as it becomes foul and unfit for use in a short time.

Feed three times a day: the mash morning and noon, and corn at night. This diet will, in a few weeks, put turkeys in a grand condition for market.—From Report of Poultry Associations of the Province of Ontario, for 1901.

A GERMAN BREED.

The Lakenfelder.



ALTHOUGH we cannot boast of a great number of native utility breeds, it is gratifying to note that our German specialty breeders have, by dint of industry, and perseverance, succeeded in establishing certain distinctive sorts, which we may justly call our own, not merely because they are solely kept by our countrymen, but because they actually originated with us. We used by no means be ashamed of these home products; on the contrary, we may confidently place them side by side with foreign creations, and they will be able to hold their own in every respect. The subject of our article—the Lakenfelder—belongs to this category, and occupies rather a prominent position chiefly on account of its characteristic plumage, which testifies to the ability of our breeders in producing even a contrast of totally opposed colors.

Our country breeds are naturally destined for utility purposes, however, as the formation of their body does not specially favor flesh production, the more profitable laying qualities have been chiefly developed. This refers also to the Lakenfelder, which have always been bred with a view to increased egg production, and one of the principal objects of breeders must, therefore, be to maintain size of eggs, so as to enable the breed to successfully compete with others. To attain this object, special care is required in the selection of layers, hens being preferred with broad and well developed hind parts. The chief aim, however, is maintenance of type, for even with a utility breed appearance should be studied, lest neglect in that respect be followed by decadence of racial characteristics comprising productiveness.

The original home of the Lakenfelder was north—or more correctly speaking—north-western Germany, Hanover and Westphalia sharing the honor of having produced—or at least preserved—this beautiful breed whose plumage is pure white, with black tail and neck hackle. Thus appareled, the breed is of striking appearance, but it must by no means be assumed that perfect coloring is easily attainable, considering that black should be strictly confined to certain parts only. Cocks, in particular, are apt to show black markings in center of saddle feathers, and if the neck is sound black right up to the nape, this defect is passed over, while if accompanied by white in neck hackle it must certainly be condemned. If we wish to preserve the black pure in neck and tail we must look to undercolor, which should be grayish rather than white, for the whiter it is the more will it tend to expel black from the plumage. Rather permit (in breeding) the grayish undercolor to slightly penetrate to the surface plumage (provided there is not too much black showing on the hack), than the appearance of white in tail or neck hackle. Some breeders consider white edging of the cock's sickles typical; in our opinion, however, this counteracts the proper breeding tendency, which aim at black tail without any white.

The body of the bird is rather long, the breast nicely rounded and full, also the back portion rounded, and the ventral part not of pointed appearance, the body to be carried almost horizontally, and the back to be but of medium length. The saddle is not to be too profusely feathered, but, at the same time, rather broad. Thighs short and strong. The wings in front are partly hidden by breast

plumage, carried high, and well covered by saddle behind. The sickles of cock to be nicely curved, and the tail not to be carried too high. Leg color, slaty blue. Comb: single, upright, of medium size, and well serrated. Color of comb, face, and wattles, bright red, ear lobes white. The black of tail and neck is to be of velvety appearance, which can only be attained by brilliant gloss of plumage.—(Geftuegel Zeitung, Leipzig).

An Egg Eater That is Different.

I have a curious case of egg eating now in my yards.

A few weeks ago it began to happen regularly that some of the eggs in two adjoining nests in one corner of one of the pens were broken and eaten late in the afternoon, the eggs not broken being very much daubed up, and the nests torn to pieces. It was never done early in the day, and if eggs were gathered about three or four o'clock there was no trouble.

As soon as I had an opportunity I set a

watch for the culprit, and caught a two year old hen in the act. She was shut in a small pen occasionally used for sitters until an opportunity to dress her occurred. The next evening when I came home I discovered that she had laid on the floor, but had paid no attention to the egg. I put in a nest box, and left her there for a few days. She laid almost daily, and never disturbed the nest or egg.

There was one hen—identity unknown—which, instead of laying in the house, laid among some raspberry bushes beside a stone wall at one side of the yard. As no eggs were laid there while this hen was shut up, the conclusion was reached that she was that hen. Taking it for granted that as she did not molest her own eggs, she was not a confirmed egg eater, I returned her to the pen from which she had been taken. The nest by the wall again contained an egg almost daily. For perhaps a week the nests in the houses were not disturbed. Then one day I came home late in the afternoon to find those same two nests all torn up. Next day I came earlier and caught this same hen in the act.

Again I shut her up intending to kill her—this time in an unused dog house, putting a couple of slats over the opening. She laid here the next day and the day following, and did not attempt to eat her egg.

So as a final test I put a few eggs in the nest in the pen where the breeding hens are kept, put her in the yard. In less than ten minutes she had found her way to this nest, had broken the eggs—and was back in the dog house.

This time she gets up replete. But why doesn't she break her own eggs?

IT KILLS LICE

Chloro Naphtholeum

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EDITOR'S NOTE For 40 years the Peabody Medical Institute has been a fixed fact, and it will remain so. It is as standard as American Gold. The Peabody Medical Institute has many imitators, but no equals.—Boston Herald.

22 Custom House St., BOSTON, MASS.

The Source of Profit.

To how many property owners—people that pay out their money for paint and painting—has it ever occurred that it is unprofitable to the painter when paint is too durable? The expense of painting is in the labor of applying, not in the material applied. The actual cost of the paint used in doing, say a hundred-dollar job, is scarcely more than ten or fifteen dollars, the rest being workmen's wages and painter's profit. On the paint the painter may make possibly one or two dollars, but on the application of it he makes perhaps ten dollars or more. It follows that the oftener he can repaint the more he makes.

Now, while I do not mean to intimate that the average painter has figured the proposition out in this way and deliberately proceeds accordingly to defraud his patrons with paints that he knows to be inferior; yet at the same time I do think that many painters are unconsciously biased by the facts of the case, and this may explain their adherence to materials which all experts have agreed in pronouncing inferior.

The whole paint world, and outside of the painters has long since decided that a fair proportion of zinc white is essential to durability in any white or tinted paint, yet the old time painter still clings to "straight lead." If it does not "stand," he considers himself free from blame; but he profits by the necessary renewal, and the consumer foots the bill.

This paint problem has many sides, and this is a phase of it that has as yet received but little attention.

STANTON DUDLEY.

NEWS NOTES.

Mr. Geo. A. Chapin, of the Scantic Poultry Yards, Hampden, Mass., calls attention to his change of address to Ludlow, Mass. His location remains unchanged. The P. O. address is changed to get the benefit of R. F. D.

We have recently received a copy of the advance announcement of the Walla Walla, Wash., poultry show to be held Dec. 16—20, 1902. This is the fourth annual exhibition of this association. C. B. Auker is president. Julius A. Levy, secretary.

The Poultry Fanciers' Association, of Milwaukee, was organized March 25th, with twenty members. They expect to hold "club shows" at intervals through the summer and early fall for the mutual benefit of members, and subsequently a large show for general competition.

Mr. J. W. Randall, of Meadow View Poultry Yards, Malden, Mass., is about to remove to Canobie Lake, N. H., where he has purchased a thirty-five acre farm, and intends to go into poultry keeping on a more extensive scale, still continuing, as we understand, to make a specialty of Barred Plymouth Rocks.

Persons interested in lice exterminators and disinfectants should investigate the claims made by the La Porte Insecticide and Disinfectant Co., of Plattsburg, N. Y., for their French Insecticide and Disinfectant. Besides being applicable to fowls and in the poultry yard, it has a variety of uses which will recommend it to both housekeepers and stock growers.

One of the most progressive seedsmen in this country is Hon. John Lewis Childs, of Floral Park, N. Y. His large, elegant catalogue is sent free to all who apply, and it presents an array of choice new flower and vegetable seeds, bulbs, plants and fruits, which is really enticing. Mr. Childs has been in business twenty-six years, is well known, and thoroughly reliable.

Geo. H. Northup, Racville, N. Y., changes his card this month to offer eggs at reduced rates, also some of his breeding stock to make room for growing chicks. He writes that his Minorca eggs have shown remarkable fertility this spring. Readers who are interested in the great laying qualities of Black Minorcas should see Mr. Northup's large catalogue, and procure some of his bargains while they are to be had.

At "Breck's" the other day, we had the pleasure of meeting Mr. Chas. H. Lilly, of Lilly, Bogardus & Co., Seattle, Wash., who have the agency for the Prairie State incubators there. Mr. Lilly has been making an extended trip through the south and east, and had much information to convey as to conditions of interest to a poultry editor. Not the least pleasurable part of the meeting was the quickly made discovery that both were sons of the grand old "Prairie state"—Illinois.

Make cows pay, use Sharples Cream Separators. Book, "Business Dairylog" and Cat. 249 free. W. Chester, Pa.

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Poultry Books.

In response to requests from a number of readers for information and advice as to books to read as aids in learning poultry keeping, we give herewith a list which we think will be found to cover the field for any and all of them.

In presenting this list we wish to say to those who make use of it that "Poultry-Craft" is the only book we recommend to a beginner as a text book, it being the only one so compiled as to adapt it to such use. At the same time the student will find many of the other books going into their special topics more extensively than it does, and our advice to a reader would be to begin with "Poultry-Craft," and from time to time add such other books as seemed likely to be of use to him. We would not advise any beginner to buy a complete "library" with the idea that it will be of greater assistance to him than a few carefully selected books. The beginner's motto with respect to this phase of learning should be: *Read little, think and study much.*

In the foreign books—English as well as others—there is very little of instructive value to the American beginner, for not only do they deal with different conditions, but the ideas and methods which they present are often antiquated and unsatisfactory as compared with the better methods developed in practice in America, where on the whole the practical poultry culture is far in advance of that of other countries. The older American books are to be avoided, or used simply for their historical value for the same reasons.

For prices and descriptions of books mentioned address the publishers or dealers named in connection. Many of the older works are out of print, but may frequently be picked up at second hand book stores.

Books Published and for Sale by Farm-Poultry Publishing Co.

Poultry-Craft, (Robinson), 1899.
Winter Eggs, (Robinson), 1900.
Broilers for Profit, (Boyer), 1897.
Profitable Poultry Farming, (Boyer), 1896.
A Living from Poultry, (Boyer), 1896.
Farm-Poultry Doctor, (Sanborn), 1896.
Practical Poultry Keeper, (Wright) (English book), 1901.
* American Standard of Perfection.

Books for Sale by Ferris Publishing Co., Albany, N. Y.

All About Broilers, (Boyer).
Artificial Incubation, (Von Culin).
Capon and Caponizing, (Dow).
Capon for Profit, (Grenier).
Duck Culture, (Rankin).
† Illustrated Book of Poultry, (Wright).
Philosophy of Judging, (Felch, Babcock, and Leg).
† Practical Poultry Book, (Lewis).
Poultry Culture, (Felch).
Some of Lee's Ideas, (Lee).
The Business Hen, (Collingwood).
The New Egg Farm, (Stoddard).
Turkeys, and How to Grow Them, (Myrick).
Wyandottes, Silver, Golden, White, and Black, (Wallace).

Books Published and for Sale by Reliable Poultry Journal Publishing Co., Quincy, Ill.

Success With Poultry, (Curtis).

Eggs and Egg Farms, (Compiled by Curtis).
Ducks and Geese, (Compiled by Curtis).
Artificial Incubation and Brooding, (Compiled by Curtis).
The Wyandottes, (Compiled by Curtis).
The Bantam Fowl, (McGrew).
The Plymouth Rocks, (Compiled by Curtis).
The Leghorns.
Poultry Houses and Fixtures.

THE POULTRY KEEPER PUBLISHING CO., of Quincy, Ill., publishes a series of books called Poultry Keeper Illustrators, each of which covers a variety of subjects.

Miscellaneous.

Of these we cannot attempt a complete list, but give as many as possible of those likely to interest some reader.

† The Poultry Book, (Tegetmeier).
Domestic Poultry, (Doyle), 1857.
American Poultry Yard, (Browne), 1857.
The Poultry Book, (Bennett), 1852.
Domestic Poultry, (Saunders), 1874.
† Poultry Keeping, (Beale).
† The Langshan Fowl, (Croad).
† Pleasurable Poultry Keeping, (Brown).
† Poultry Yard, (Watts).
† Diseases of Poultry, (Hill).
† Pheasants, Turkeys and Geese, (Cook).
† Ducks, (Cook).
† The Orpington Fowl, (Cook).
† The Poultry Breeder and Feeder, (Cook).
Poultry's Companion, (Bement), 1845.
† Poultry Diseases, (Vale).
Diseases of Domestic Poultry, (Burnham).
Poultry for Market, (Field).
Our Poultry Doctor, (Field).
Poultry Compendium, (Babcock).
The Hen Fever, (Burnham).
The American Poultry Book, (Cocke).
Poultry, (McFetridge).
How to Win Poultry Prizes, (Stoddard).
In the same series and by the same author, are: "Poultry Diseases," "Poultry Architecture," "Light Brahmas," "White Leghorns," "Brown Leghorns," "Plymouth Rocks," "Domestic Water Fowl," "Incubation, Natural and Artificial," "How to Feed Fowls,"
† Leghorns, (Hesford).
† The Leghorn Fowl, (Verrey).
† Minorca Fowls, (Biggs).
† Hamburgs, (Holt).
† Poultry Farming, (Cobb).
† Fattening Fowls, (Cobb).
The Leghorn, (Ayres).
Pocket Money Poultry, (Norys).
Easy Poultry Keeping for Invalids, (Norys).
The Biggle Poultry Book.
The Wyandottes, (Clough).
The Plymouth Rocks, (Clough).
Clough's Bantam Book, (Clough).
The Indian Game, (Babcock).
The Book of Games, (Stoddard).
The Book of the Dorking, (Stoddard).
Secrets in Fowl Breeding, (Burnham).
The China Fowl, (Burnham).
Development of the Plymouth Rock, (Bishop).
Artificial Incubation, (Halsted), 1880.
Hydro Incubation, (Christy).
The Argonaut, (Babcock).
The Bantam Book, (Stoddard).

* Published by American Poultry Association.
† English Book.

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FARM-POULTRY PUB. CO.,

22 Custom House St., Boston, Mass.



Food, Fresh Air and Feathers.



EDITOR FARM-POULTRY:—I notice that you are giving some attention to cold poultry houses. The enclosed clipping may be of interest to you as showing the advantage of nature's own poultry house—the tree.

I have a brood of 21 Houdan chicks hatched April 28th. I put the 21 chicks with a hen until they were two weeks old, and then took away the hen. They are kept in a large coop, 4x10 ft., with a small wire netting run, 4x6 ft. Today at four weeks old they are the best feathered out lot of chicks I have ever seen.

On May 15th I hatched five Buff Plymouth Rocks, and left them with a hen for one week, then put them in with the 21 Houdans. All these chicks seem to grow faster than others hatched at the same time, and kept with hens to brood them.

If it is true that chicks hatched not earlier than May 1st require no brooder or hen to care for or warm them after they are a week old, it is a fact worth knowing. It is the old hen that scratches out, kicks over the water pan, soils the feed, and, in fact, causes nine-tenths of the work in caring for chicks.

Pittsfield, Mass. P. W. POWER.
May 27, 1902.

The clipping enclosed is from the *Springfield Republican*, and is a review or abstract of an article by James Shackleton in the *Tribune Farmer*. The *Republican* article evidently contains some long verbatim quotations from the original *Tribune* article, but as the quotations are not so indicated it is sometimes uncertain whether a statement is in the original form, and correctly represents Mr. Shackleton's views, or has been perverted in the newspaper man's condensation. The three following paragraphs from the middle of the article in the *Republican* seem to be literal quotations throughout. Mr. Power had marked the last two of these, but as the first is so closely connected with them I give here the three.

"Overheated brooders greatly diminish the perfection of chicks' plumage while domiciled in them, and possibly afterward. It is certain, to my mind, that fowls have plumage according to the general circumstances of their lives. The development of plumage in chicks plainly stops at the point where they are warm enough when in the brooder, so if the heat of the brooder is too great, the chicks are imperfectly protected when outdoors. This accounts for the very general prevalence of the notion that brooder chicks have not the perfect plumage of hen raised chicks. We can make better plumage on brooder chicks than hen raised chicks have, by feeding balanced rations, keeping brooders at moderate heat and well ventilated, and putting chicks in unheated growing houses as early as possible. We have had such chicks, at very early ages nearly drowned by heavy summer rains, and never showed any ill effects from it. When fairly grown, and with perfect feathering, they rarely shelter from an ordinary summer rain. Their plumage is very profuse, the under down especially so, and of great density, so that rain does not penetrate easily. Our adults rarely shelter from an ordinary down-pour, summer or winter. Even on days when rain falls heavily all day they are out in it much of the time, and we never seek to prevent this. It never appears to hurt them.

"But when to balanced rations, moderate heat of brooders, great liberty during growth, growing houses that are mere shelters until perfectly feathered, is added outdoor roosting, wonderful results accrue. We have some scrubs. Only one is of original stock, and one of next generation, half Wyandotte. In 1900 we retained many of these half Wyandotte scrubs up to maturity, both cockerels and pullets. About eleven of these adopted a large cherry tree as their roosting place in summer and autumn, about five went under cover during winter, but about six, two of them cockerels, roosted in the cherry tree all winter. After some time we noticed a difference between them and all other birds we had. After nights of continuous heavy rain they came from the tree in the morning look-

ing as dry as possible. The rain did not penetrate their plumage any more than that of ducks which swim every day. When we killed the outdoor roosting cockerels the amount, density and silkiness of their plumage was marvelous. They had passed through winter cold, rain, snow and ice on the tree unscathed. Only one comb ever was seen frozen, and that was of a bird that never seemed to know whether to roost outdoors or not, and did either one or other, apparently regardless of weather. One of the pullets that endured the ordeal quite through winter is our best laying hen now.

"When we expected the pullets to begin laying we cut off the lower branches of the cherry tree so that the birds could not reach it, and thus compelled them to roost indoors. The pullet we retained was beautiful in appearance last year, but since she has molted and roosted indoors her plumage has become rusty in color. Otherwise she is still of exceptional hardness and indifference to cold, rain, snow, or ice. Her mother, the sole living bird of the original scrub stock, roosted all last winter in a shed with south side fully open. At this writing she has laid thirteen eggs in fourteen successive days, and we do not expect a blank day soon, for her egg yesterday was laid before 11.10 a. m. She is nearly three years of age."

The case stated by Mr. Power is one of those into which I always wish I could make a personal investigation. Knowing nothing at all of the extent and kind of his experience with poultry, I do not get a satisfactory understanding of his statements.

The experience which he cites is too limited to warrant the supposition that after May 1st chicks a week old need no other heat than they supply to themselves and each other. The Houdans had been without the hen two weeks, the Buff Plymouth Rocks five days. Mr. Shackleton's article coinciding to some extent with this brief experience may have had most to do with the development of this notion of raising chicks without supplied heat from some source.

Whether the chicks need brooding after the first few days, in late spring and summer, depends upon the temperature and the warmth of their quarters. The question is not essentially different from the question:—At what age should chicks be weaned? No hard and fast rule can be given. Each case must be decided by itself, and in accordance with its own conditions. The wise poultry keeper will always give the chicks the benefit of the doubt, and make provision for the lowest probable temperature.

In late spring and summer, chicks, after the first few days, generally need little more heat than they themselves furnish, and may thrive without any heat from hen or lamp, but if they do happen to need extra heat and there is none available they are sure to suffer. More than one poultryman has learned by dear experience that even when it is so warm through most of the twenty-four hours that heat from the lamps is not needed, the lamps must be always ready for use. Some of them consider the safer way to keep the lamps going, even if by so doing they make it so warm under the hover that the chicks lie outside. When a fall in temperature occurs the chicks can then withdraw as far as they wish under the heated hover. Though Mr. Shackleton has advanced some singular ideas about chicks I hardly think he would put the age of weaning at this season at one week. His "as early as possible," might mean three or four weeks.

To Mr. Shackleton's general propositions as to the relations of food, temperature, exposure and plumage, little objection would be made by any well informed poultryman. It takes an abundance of nourishing food to secure a growth of feathers proportionate to bodily development of rapidly grown chicks. The chicks develop better in every way if not subjected to hot house conditions. Chicks which roost in the open air, as a rule, have plumage of finer quality than those which roost under cover; but in reasoning from his observations of these things, Mr. S. overlooks other equally important things, and often makes unwar-

ranted deductions and inferences, and advances his propositions to extremes that are untenable.

When, for instance, he says that he can "make better plumage on brooder chicks than hen raised chicks have," he is wrong. His illustration of the chickens that roosted in the tree "reminds me." In 1898 I raised some seventy-five or eighty Buff Leghorns in an orchard. They roosted in the trees from the time they were able to fly to the lower limbs until November. In the lot were five pullets which both in their chick feathers and in mature plumage invariably attracted the attention of poultrymen who saw the stock. These pullets were bred from a cock of great brilliancy and density of plumage mated to one of his own daughters, not at all notable in that respect.

Now it would be the most natural thing in the world for anyone not acquainted with the history of the stock to attribute the excellence of the plumage of these pullets to the roosting condition and to the fact that those five pullets which early formed the habit of ranging beyond the range covered by the flock secured more animal food in the shape of bugs and worms; but the sire of these pullets after taken from the hen as a chick, always roosted in a warm house, was rarely out of a small yard, and had been reared and kept all his life on a diet in which corn predominated, (as it did in that of the pullets), and his plumage was just as good as theirs. I cannot help thinking that if Mr. S.'s birds in the trees developed such phenomenal plumage as compared with the others, the others must have been very badly off in respect to feathers.

Every intelligent poultry breeder knows that while food and fresh air have their due effect in the development of plumage, heredity and breeding are the primary influences, and in the individual bird the constitutional quality of, or tendency toward, perfection of feathering must be present, or neither food nor conditions will make it. You can utterly spoil a specimen having in it possibilities of exceptional development, simply by withholding the means of development; but in case of a specimen of only ordinary possibilities, the most favorable food and circumstances can produce nothing marvelous. The best that can be done in this way is to make a slight improvement.

In considering the matter in the clipping above, the reader should keep in mind the fact that the habit of indifference to summer rains

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SCORERS.
HEAVY
LAYERS.



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observed in the specially reared brooder chicks—supposed to have better plumage than hen brooded chicks—is the common habit of stock which for generations has been accustomed to ordinary exposure. The description of the plumage in the other case mentioned as impervious to water, is doubtless an unconscious exaggeration.

It is to be regretted that the case for fresh air and wholesome abundant food in the quotation was not presented more carefully, with due regard for other influences, and with a little more restraint in conclusions from limited data. The point involved is a good one, and one that needs to be urged, but to urge it effectively there must be more moderation than is shown in the assertion of ability to outclass the best of natural conditions, and better judgment than appears in the conclusion that: Given a hen of fine plumage as a pullet, when she roosted in the trees; if this hen subsequently, when roosting in the house, shows very inferior plumage, the failure must be due to the effects of roosting under cover.

In truth, such a conclusion following a statement of the marvelous things to be accomplished by the use of a "balanced ration," is apt to provoke the mirth of those who without delicately balanced rations get and keep fowls in perfect plumage under cover. This case reminds me of a story of a certain woman, a prominent authority on cooking, who was wont to condemn any bread that was not entire wheat bread as quite unfit for the requirements of the human body.

As the story goes, she had a son who was interested in school athletics. Of course his mother was interested in them too. One day the young man was defeated in a contest in which he had been expected to excel. His mother wanted to know how that happened. His reply was in effect that the supply of entire wheat bread for the training table gave out the day before the contest and he had no bread but white bread to eat, he was not in fit condition to compete.

This hen seems to have been dependent on the tree for her condition. If so, it speaks volumes for the virtue of fresh air, but not much for the hen or for the other conditions surrounding her.

Wanted:—A New Hypothesis.

The more chickens I hatch the more firmly convinced am I that I know little about the scientific aspects of the case. Every time I meet a new phenomenon I frame a new hypothesis to meet the cause, and my hypotheses gradually fall down, and I am reduced to the agnostic position,—I don't know.

Par example: I set two hens on the same day from eggs from the same pen, and there were eggs from the same hen in the different sittings; both hens set equally steadily, so far as I could judge. One old lady brought off eleven chicks from twelve eggs. The other brought off one chick only from twelve eggs. Neither sitting was tested out. On examining the bad sitting I found that the eleven bad eggs were infertile. In the good sitting one chick died in the shell.

Hypothesis: The good sitting was placed in a leaky dish pan in a hollow in the ground, with an elevated box above it. The bad sitting was placed in a barrel; it rained during incubation, and a possibility is that some of the rain was retained in the barrel, and rotted the eggs.

Another phenomenon: Brought off an incubator hatch of forty-one chicks from forty-five fertile eggs one week ago. Today I got a hatch of twenty-two chicks from eighty tested fertile eggs. Same machines, same room, same handling exactly, and eggs from same pens exactly. Hypothesis: weather one week ago was sharp, brisk and cheerful; this week it has been hot, close, sultry and showery.

Neither the hypothesis for the hen hatch nor the incubator hatch is entirely satisfactory to me. Not having observed the concomitant conditions in the hen hatch, I am prepared to refrain from framing any theory to suit the circumstances. In the case of the incubator hatch, so far as I can observe the only varying condition was the weather. Consequently I am forced to look to the weather for an explanation for the vastly varying results. In the case of the successful hatch the weather was, during the 18th, 19th, 20th, and 21st

days, hot, close and sultry. It was the kind of weather when it required unusual exertion on the part of human beings and animals to accomplish things ordinarily very easy. The temperature in the egg chambers in the successful and in the unsuccessful hatches were practically the same. The ventilators were opened to the same degree in each case. Of course the amount of artificial heat supplied varied greatly in the two cases, and having no areometer, I can only guess at the amount of air draft over the eggs. The ventilators were handled practically the same in each case. I say practically because I am not prepared to state exact figures to the sixty-fourth of an inch.

The machines were three Cyphers incubators, exactly alike, and from which I have brought off some fifty hatches since I owned them.

It strikes me that there must be atmospheric conditions connected with artificial incubation which a thermometer does not register, and that the investigation of hatches under varying conditions of atmosphere would be a fruitful field for some experiment station to work up. There are evidently certain important factors in the problem, of which our present knowledge is very limited.

Chicago, Ill.

E. L. C. MORSE.

May 21, 1902.

What is the "Essential Quality" of Mash?

Editor FARM-POULTRY:—Poultry experts agree that a meal mash ought to be cooked and also fed in a dry, crumbly state. Corn meal and the like are cooked by absorption of boiling water which swells the meal. The meal is not properly cooked until it has absorbed all the water it is capable of taking up, and then it is of a pasty or doughy consistency. In this state it is fit for and used for human food, i. e., johnnycakes, mush, etc.

To produce a dry, crumbly feed, the state insisted upon by poultrymen, one can use but little water, and hence cannot cook the meal. It is simply ground grain moistened.

Now which is the proper food for fowls,—cooked meal or moistened meal? I do not know how to cook meal dry and crumbly, nor has anyone been able to show me. In other words, which is the essential quality,—cooking or crumbliness?

Middletown, Conn. S. R. COLEMAN.

Mr. Coleman is in error in supposing a general agreement of poultrymen as to the necessity of cooking food. Methods and opinions differ. "Mash" food is given poultry in all stages from wet to thoroughly cooked. Judging by results, an unbiased observer can come to no other conclusion than that it makes no difference whether the food is raw or partially or wholly cooked. Limited observation or results of single experiments might seem to show an advantage in some cases in favor of the cooked food, but in other cases there would be no apparent advantage either way. Whatever some authorities may affirm, we have at present nothing conclusive in favor of any particular method.

Meal can be cooked without absorbing any water,—by browning or parching it. It may be thoroughly cooked in more water than it can absorb; as it is in a gruel. It may be cooked under various conditions with different quantities of moisture, yet in every case be thoroughly cooked. A johnnycake may be quite wet, soggy, or it may be so dry that it is easily crumbled in the hand. A mash may be sloppy or so dry that there is no adhesion of the particles of it. I cannot give such an illustration of these points on paper that Mr. C. would understand them clearly, but I think that if he will study the matter, and experiment with mixing mashes, varying the mash from day to day, little by little, in such ways as seem to be bringing him toward the desired results he would soon learn that you can have any desired degree of moisture combined with any desired condition from raw to thoroughly cooked. It may be found also that fowls appreciate occasional variations in the preparation of the mash.

Neither cooking nor crumbliness is really essential, though in regard to the amount of water in a mash, it should be said that either extreme is to be avoided. In cooking corn

meal and bran together, an adhesiveness is developed which cannot be obtained in the simple combination of these two articles uncooked. While a mash should not be crumbly to mealiness, it should not be pasty, as a cooked mash with too much water in it, nor sloppy, as a too wet raw or half cooked mash is. With meal and bran (shorts) alone it is not possible to get a raw or nearly raw mash with as much adhesiveness as is desirable to make it relished by the fowls, and to avoid the waste which is usual when the particles of meal and bran do not adhere. The desired condition is then most easily secured by adding a little low grade flour or red dog flour,—I prefer the former, which will stick it together without making it pasty.

As stated, I don't think anyone can get a correct idea of what I have tried to explain out of description, apart from experiment in mixing. When a question like this comes up, I always wish I could personally give the correspondent a few illustrations of, and lessons in the preparations of mashes. Judging from questions asked, and from prevailing misapprehensions about the use of mashes, I have often thought that comparatively few poultrymen had acquired the knack of making a good mash. Of course this reference is to poultry keepers generally. The mashes used by successful poultry keepers are usually good ones. Let me suggest to any reader not sure of his ability to make a good mash, that he make it a point to see what sort of mash other poultrymen of his acquaintance make. I don't think he can go far without finding one that fills necessary essentials.

The Rights of a Chick.

Myrtle H. Sperbeck, in the *Poultry Gazette*, concludes a clever and instructive short article on the above subject, with:—

"A chick has a right to be owned by some one having a certain amount of common sense. It also has a right to insist that said owner use a liberal supply of said common sense in administering to its wants. Any one trying to raise chickens without the aforesaid ingredient (common sense) had better get some as quickly as possible or else get out of the business. For without it they can never make a success. How do I know all this? Well, I have been taking lessons from little Miss Experience, whose maiden name is Bitter. And as she is rather steep in her charges, I thought I might save you something by giving you some hints that I received from her."



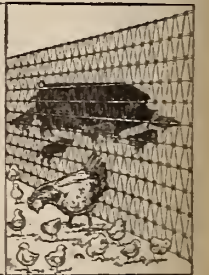
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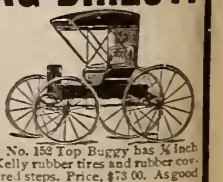
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